ELLIS ISLAND, CONTAGIOUS DISEASE HOSPITAL MEASLES WARD A
(U.S. Immigration Station)
Statue of Liberty National Monument
New York Harbor
New York
New York County
New York

HABS NY-6086-T
HABS NY-6086-T

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

FIELD RECORDS

HISTORIC AMERICAN BUILDINGS SURVEY
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HISTORIC AMERICAN BUILDINGS SURVEY

ELLIS ISLAND, CONTAGIOUS DISEASE HOSPITAL MEASLES WARD A
Ellis Island, Contagious Disease Hospital Wards 17 and 18

HABS No. NY-6086-T

Location: Ellis Island, New York Harbor, Jersey City, Hudson County, New Jersey; and New York City, New York County, New York

Present Owner: U.S. Department of the Interior, National Park Service

Present Use: Vacant

Significance: Measles Ward A, later known as Wards 17 and 18, was one of eight identical measles pavilions constructed for the Contagious Disease Hospital complex on Island 3 of the Ellis Island U. S. Immigration Station. Its construction in 1907-08 greatly expanded the hospital facilities run by the U. S. Public Health and Marine Hospital Service (after 1912, U. S. Public Health Service, or USPHS) in conjunction with the Bureau of Immigration at Ellis Island. Concerns about the spread of contagious diseases such as measles, scarlet fever, and trachoma (an eye disease that could lead to blindness) prompted Ellis Island officials to lobby for an expanded hospital capability on the island itself, rather than transporting these cases to medical facilities throughout New York City. This effort represents both compassion in providing highly professional medical care for ill immigrants and fears regarding urban public health and the potential diseases carried by arriving aliens. In later decades the function of the USPHS hospitals at Ellis Island shifted to include caring for a complex mix of immigrants, detainees, merchant seaman, service members and other local citizens eligible for government medical care.

Measles Ward A and the Contagious Disease Hospital were designed by James Knox Taylor, the Supervising Architect of the Treasury. The Office of the Supervising Architect was responsible for the design of federal facilities, in this case working for the Department of Commerce and Labor in consultation with the USPHS surgeons assigned to Ellis Island. The Contagious Disease Hospital was a mature example of a pavilion plan hospital, a form favored since its establishment in Europe during the nineteenth century and in the United States largely since after the Civil War. Self-contained ward pavilions were arranged for maximum healthful ventilation and light and linked to administration, kitchen, and staff quarters by covered corridors. Each pavilion floor had a spacious open ward with large windows on three sides and independent ventilation ducts. A hall leading to the connecting corridor was flanked by bathrooms, nurses' duty room, offices, and a serving kitchen. Measles

Ward A and the various Island 3 Contagious Disease Hospital buildings were unified by Georgian Revival exteriors, with red tile roofs, pebble and dash stucco wall treatment, and red brick quoins and details. This decorative mode complemented the Georgian Revival monumentality of the Island 2 general hospital while the detailing and lower scale of the new hospital made it visually distinct.

The USPHS vacated the hospital facilities on March 1, 1951 and the U.S. Coast Guard Port Security Unit at Ellis Island used portions of the Island 3 hospital for file storage. The Ellis Island U. S. Immigration Station ceased operation on November 12, 1954 and the complex was largely unoccupied until it was made part of the Statue of Liberty National Monument in 1965, under the administration of the U. S. Department of the Interior, National Park Service. Measles Ward A remains as one of the most intact examples of an original pavilion ward, with few alterations and many surviving original features.

Historian: Lisa Pfueller Davidson, HABS Historian, 2010.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: Ward A was built between January and November 1907 as part of the initial building contract for the Island 3 Contagious Disease Hospital complex. Delays installing and activating plumbing, heating, and electrical systems meant that the hospital was not occupied by patients until 1911.

2. Architect: Office of the Supervising Architect, Department of the Treasury, James Knox Taylor, Supervising Architect

3. Original owners: U.S. Department of Commerce and Labor, 1907-1912
Subsequent owners: U.S. Department of Labor, 1913-1940
U.S. Department of Justice, Immigration and Naturalization Service, 1942-1954
U. S. General Services Administration, 1954-1965
U.S. Department of the Interior, National Park Service, 1965-present

4. Contractor: North-Eastern Construction Co., New York, NY

5. Original plans and construction: Historic plans and field inspection indicate that Ward A is an excellent intact example of a measles pavilion for the Contagious Disease Hospital (Ward B is in similar condition). Not only are the exterior massing and materials original, but the original open ward plan is extant and many features such as doors and windows retain their historic fabric. The original system of natural ventilation with ducts and flues connected to ventilator pipes in the attic is still largely intact. In 1906, the Office of the Supervising Architect, under the direction of James Knox Taylor, prepared standard plans for eight measles wards on Island 3. This drawing set includes elevations, floor, roof and foundation plans, and framing plans (Figures 1-3).[1]

6. Alterations and additions: Ward A received new floors and some plumbing fixtures during 1936-37. A small water closet was inserted at the back of the first floor linen room for the nurses' duty station.

B. Historical Context:

The United States Immigration Station at Ellis Island was perhaps the most well known of the federal immigration facilities established at the end of the nineteenth century. The Immigration Act of 1891 formalized federal control of immigration in reaction to uneven state regulation and a growing influx of immigrants. The Bureau of Immigration was created within the Department of the Treasury. The original immigration station on Ellis Island opened January 1, 1892 and processed 700 people that first day. On June 15, 1897, fire swept through the complex, largely destroying its wood structures. During their tenure, more than 1,500,000 immigrants were processed through these buildings.[2] This time federal officials sought to create a more permanent and distinguished structure.[3]

The Office of the Supervising Architect of the Treasury quickly began planning a new facility.[4] In September, the Supervising Architect James Knox Taylor sought designs in an architectural competition under the terms of the Tarsney Act, only the second time this had been done. Passed by Congress in 1893, the Tarsney Act authorized private sector architects to submit designs for federal projects.[5] The New York firm of Boring and Tilton won the competition. Their plan called for a monumental complex on "Island 1" with three, primary,

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[1] Original drawings for Ellis Island buildings are digitized and available from the Technical Information Center (TIC), Denver Service Center, National Park Service, U.S. Department of the Interior at http://etic.nps.gov.
[2] Harlan D. Unrau, *Historic Resource Study (Historical Component) Volume I of III: Ellis Island Statue of Liberty National Monument, New York-New Jersey*, (U.S. Department of the Interior, National Park Service, 1984), xix.
[3] J. Tracy Stakely, *Cultural Landscape Report for Ellis Island Statue of Liberty National Monument: Site History, Existing Conditions, Analysis* (Brookline, MA: National Park Service, Olmstead Center for Landscape Preservation, 2003), 29. See also Diane Elizabeth Williams, Historic American Buildings Survey (HABS) No. NY-6086, "Ellis Island," 2009. Prints and Photographs Division, Library of Congress, D.C..
[4] Between 1890 and 1892, immigrants arriving at New York were processed through Castle Garden and then through a building called the Barge Office. According to Harlan D. Unrau, *Historical Resource Study Volume II*, 215-216, between 1897-1900 an annex to the Barge Office was turned into an inspection station for steerage passengers and two large houses on State Street fronting the Battery were leased for detention and hospital uses.
[5] Antoinette J. Lee, *Architects to the Nation: The Rise and Decline of the Supervising Architect's Office* (New York and Oxford: Oxford University Press, 2000), 201.

"fireproof" buildings—a French Renaissance Revival immigration building roughly on the site of the burned structure, a kitchen and laundry building, and a powerhouse – arranged along a northeast/southwest axis. Additionally, Boring & Tilton proposed a new island to the south across a ferry slip as the site of an imposing Georgian Revival hospital complex.[6] Both revival styles stood firmly within the Beaux Arts approach popular in late nineteenth century America. Each island was a discrete unit with Island 1 containing public spaces for immigrant inspection and processing, immigrant dormitories and related functions and Island 2 devoted to the more private, and quiet, needs of a hospital complex. Each island also had its own food preparation, laundry and sanitary facilities.

The Main Immigration Building on Island 1 opened December 17, 1900, processing 2,251 immigrants the first day.[7] Although the Immigration Building was the centerpiece of the project and the first priority, a hospital facility remained a key component of the U.S. Immigration Station. Construction of the hospital buildings on Island 2 began in March 1899. Included in the new complex were the Hospital, the Hospital Outbuilding and the Surgeon's House. Like the plan for Island 1, the hospital plan for Island 2 also placed the buildings on a linear, southwest-northeast axis. The buildings in the hospital complex featured Georgian Revival elements such as red brick walls detailed with quoins, limestone window and doorway details, and hipped red clay tile roofs.

Uniformed medical officers of the U. S. Marine Hospital Service, part of the Department of the Treasury and predecessor to the Public Health Service, were integral to federal immigration policy from the start.[8] The Immigration Act of 1891, in addition to federalizing immigration control and creating Ellis Island and the other U.S. Immigration Stations, included a provision for medical examination of arriving aliens. Those with dangerous or contagious diseases, or mental problems could be turned away by the Marine Hospital Service surgeons. Initially the hospital facilities on Ellis Island were more limited, and the most contagious and dangerous cases were sent to New York Health Department hospitals. After the fire in 1897, a variety of rented spaces were used to handle hospitalized immigrants and inspections, including a docked steamship. According to Surgeon J. H. White in 1898:

> The present arrangement for the care of sick immigrants in contract hospitals under the care of a medical officer of this service is the best method possible under existing circumstances, but it has many disagreeable and unsatisfactory features, which cannot be eliminated. It is there earnestly hoped that for the best interests of the service the building of the new hospital on Ellis Island be pushed to completion with all practicable speed.[9]

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[6] Stakely, 38.
[7] Stakely, 40-41.
[8] The U.S. Marine Hospital Service was founded in 1798 to provide medical care for merchant seamen. In 1903 the name was changed to the U.S. Marine Hospital and Public Health Service to reflect its growing role in national public health issues. In 1912 the name was shortened to U.S. Public Health Service.
[9] As quoted in Unrau, *Historic Resource Study, Volume II*, 581 from *Annual Report of the Commissioner General of Immigration* (1898).

The work of the Marine Hospital surgeons continued to increase as the number of immigrants seeking entry through the Port of New York grew. In 1900, the eight medical officers inspected 448,572 immigrants.[10] The first section of the hospital opened in March 1902. However it was immediately deemed too small and requests were made for more funding to add the remaining portions of the original design.

The U.S. Public Health Service filled many roles associated with the Immigration Station, including cabin inspections, line inspections in the Main Immigration Building, and staffing the various hospital wards. The uniformed corps of federal surgeons first had a responsibility to screen for a wide variety of diseases:

> It is their duty to determine whether aliens meet the physical and mental requirements of the immigration law. . . . All diseases of a quarantinable nature, including cholera, smallpox and yellow fever, are supposed to be detected at the Quarantine Station, and such cases rarely if ever reach Ellis Island. But the quarantine laws do not deal with insanity or such diseases as consumption, trachoma, favus, scarlet fever, measles, or physical ailments of a non-contagious nature.[11]

After state quarantine officers boarded a ship and removed any quarantine cases (cholera, smallpox, yellow fever, typhus and plague), the federal medical officers inspected cabin passengers (1st and 2nd class). Steerage passengers were inspected in the immigration building by lining up for scrutiny by medical officers. Those who were identified as having physical or mental "defects" or needing closer examination were shown to medical detention rooms. Those needing more treatment would then be taken to the Island 2 hospital or transferred to a contract hospital. Those suffering from measles, diphtheria or chicken pox were sent directly from shipboard to New York City Health Department hospitals, given that there was not yet an appropriate contagious disease hospital on Ellis Island. Trachoma (an eye disease), favus (ringworm of the scalp), and tuberculosis were the most common diseases encountered by the Ellis Island medical division, as well as many cases of measles and scarlet fever among children. As expressed by documentary filmmaker Lorie Conway in her account of the Ellis Island hospitals:

> Diseases that scarcely get passing notice today were life-threatening in 1900. . . . The PHS physicians at Ellis Island were "guardians of the gate" – the nation's first line of defense against immigrant-borne illness. . . . Growing opposition to immigration led Congress to expand the authority of the Public Health Service, requiring it to weed out the weak and the unemployable as well as the sick.[12]

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[10] Unrau, *Historic Resource Study, Volume II*, 583.

[11] As quoted in Unrau, *Historic Resource Study, Appendix D*, 324, from *Organization of the U. S. Immigrant Station at Ellis Island, New York, Together with a Brief Description of the Work Done in Each of Its Divisions* (23 October 1903).

[12] Lorie Conway, *Forgotten Ellis Island: The Extraordinary Story of America's Immigrant Hospital*. (New York: HarperCollins, 2007), 35. This book is a companion piece to a television documentary.

Ellis Island Commissioner of Immigration William Williams lobbied for expanding the Ellis Island medical facilities with a contagious disease hospital in starting in 1902.[13] The precipitating event was an announcement by the New York Public Health Department that it no longer wished to accept contagious immigrants from Ellis Island for care. Faced with dwindling support among local public health officials, the federal authorities needed to quickly increase their capacity to deal with the matter internally. In a newspaper article, New York Health Department officials complained about the growing numbers and uncouth behavior of the immigrant patients sent to them from the federal facility. Williams pushed for rapid construction of a new island, No. 3, to receive a pavilion-plan hospital. The urgent need quickly became bogged down in bureaucratic red tape. First the Secretary of War's permission was sought to create a new island within 500 feet of the existing one. Questions arose whether this distance was sufficient to guarantee safety from infection and Dr. Walter Wyman, Surgeon General, was invited to rule on the matter. Williams stated he would be happy to follow his expert advice. In a letter to Bureau of Immigration Acting Commissioner-General Frank H. Larned, he wrote:

> The principal point to be gained is . . . "absolute safety from infection." I am very glad to know that the Surgeon-General will call here, as I think he should be consulted in regard to so important a matter. . . . I understand that the best opinion now is to the effect that a single building should not be constructed, but several – say five or six – pavilions which will be more or less isolated. Each pavilion should not be over two stories in height.[14]

Williams noted that the City of New York was about to construct several contagious disease hospitals and those plans would be available for inspection by federal engineers.

Surgeon General Wyman sought a ruling from his Sanitary Board on a safe distance for a contagious disease hospital at Ellis Island. In early November 1902, Dr. J. H. White, Chairman of the Sanitary Board, conveyed their opinion that a hospital within 400 feet of the general hospital and separated by 200 feet of water with a gangway at one end "will be compatible with safety from the fear of extension of contagion."[15] A few weeks later, Wyman wrote to Williams that he would be unable to personally visit Ellis Island, but he enclosed the Sanitary Board ruling that the proposed siting would be safe for contagious, but non-quarantinable diseases.[16]

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[13] Letter, William Williams to Secretary of Treasury, (30 October 1902), File 51447/44 (Part 1A) Estimates on Construction Hospital Island, 1902, Entry 9 – Subject and Policy Files, 1893-1957, Record Group 85 – Records of the Immigration and Naturalization Service, National Archives and Records Administration, Washington, DC [hereafter Entry 9, RG 85, NARA I].
[14] Letter, William Williams to F. H. Larned, (6 November 1902), File 51447/44 (Part 1A), Entry 9, RG 85, NARA I.
[15] Letter, Sanitary Board of the USPHMHS (J.H. White, Chairman) to Surgeon General, (6 November 1902), File 51447/44 (Part 1A), Entry 9, RG 85, NARA I.
[16] Letter, Surgeon General to William Williams, (26 November 1902), File 51447/44 (Part 1A), Entry 9, RG 85, NARA I.

It briefly appeared that Williams would be able to move forward with Island 3 construction, but then a lawsuit was filed by the State of New Jersey over ownership of Ellis Island. This litigation brought the entire status of the Immigration Station into question. Orders were given to avoid any construction or improvement expenditures while the lawsuit was underway, given that the plaintiffs called for ejection of the Immigration Station from the Island. Williams chaffed under the delay, sending dire letters to Washington headquarters about the urgent need for a contagious disease hospital. For example, in July 1904 he wrote to the Commissioner General:

> Dr. Stoner has called upon me this morning to call my attention to the danger of measles and scarlet fever, particularly the former, spreading amongst the large number of immigrants who are necessarily detained in inadequate quarters. These diseases are not of a quarantinable nature, therefore the quarantine authorities decline to hold such cases; still less will they hold cases which are merely suspicious and which may break out at any time at Ellis Island. It is most unfortunate that we have not been allowed to construct the new island [emphasis original].

Williams cautioned that the need to isolate those immigrants exposed to a contagious disease could rapidly create a crisis situation. The recent arrivals on the S. S. "Arcadia" included fifteen people who came down with measles upon reaching Ellis Island. The need to detain each person's family quickly created a large number of people to deal with.

Williams went on to pointedly remind the Commissioner General:

> I send you this letter merely for the purpose of advising you of what may happen here at any time. Should measles spread rapidly amongst the detained immigrants, as it may, it is improbable that the Health Department would be able to accommodate more than a small number of the cases, and I confess I do not know what we would do with the remaining ones. There is very urgent [emphasis original] need for the immediate construction of the new island for which Congress heretofore appropriated $150,000 and specification for which is already drawn. Earlier correspondence will show that the construction of such island was regarded as the only solution of the unpleasant difficulty with which the Government may be at any time confronted, particularly since the Health Department has served official notice on the Government that it does not desire to receive immigrant patients suffering from measles or scarlet fever, its accommodations being already too small for American citizens requiring treatment. The construction of the island has been, as you know, delayed through the ejectment proceedings which are in charge of another department.[17]

[17] Letter, William Williams to Commissioner General of Immigration, (11 July 1904), File 51447/44 (Part 1A) Estimates on Construction Hospital Island, 1902, Entry 9, RG 85, NARA I.

Finally in November 30, 1904 the federal government received clear title to both Ellis Island and the submerged land around it, clearing the way for the construction of Island 3 and the contagious disease hospital.

Island 3 was built of log cribbing filled with clean soil to specifications developed by Alfred Brooks Fry, Chief Engineer and Superintendent of Repair of U.S. Public Buildings at New York.[18] Constructed between April 1905 and early 1906, the resulting island was 4¾ acres and increased the total mass of Ellis Island to 21¼ acres. It was connected to Island 2 by a wood gangway on its northwest end.

While Island 3 was under construction, planning proceeded for the Contagious Disease Hospital. In January 1905, Frank P. Sargent, Commissioner General for the Bureau of Immigration, prepared to go before the U.S. House of Representatives Appropriation Committee by asking Williams for more complete information on a new contagious disease hospital.[19] Williams replied in detail, continuing to emphasize the great need. In 1904, 627 people were sent to other hospitals at an estimated cost of $25,656, excluding ambulance and burial plots. The day he wrote a detailed report, January 28, 1905, there were 91 Ellis Island contagious cases in New York health department hospitals. Williams' description of the type of hospital desired shows knowledge of current medical practice and consultation with his USPHS colleagues:

> A contagious disease hospital is composed of several pavilions or distinct compartments, in order that the various kinds of contagious diseases may be segregated. It is obvious that the pressure on one pavilion may be very much greater than the pressure on the other pavilions at the same time, but all of the pavilions must be of such a size as to be able to accommodate the maximum number of each of the chief classes of contagious disease patients.[20]

The basic concept of a pavilion plan was clearly favored from the beginning, but plans were still nebulous at this time. Williams noted that Chief Medical Officer Dr. Stoner recommended a total capacity of at least 200. However, the engineer from the Public Buildings Service New York office, Albert Brooks Fry, believed that the proposed appropriation request would only be enough to construct a hospital for 100 to 125 patients, without severe crowding. Williams noted that "in the absence of plans and specifications it is very difficult to give accurate figures upon this point," but did not hesitate to add that in his own judgment "a good hospital, probably adequate for the needs of this Station, can be constructed for $250,000."[21]

Funds for construction of the hospital - $250,000 - were included in the Sundry Civil Act approved on March 3, 1905 and once some questions about the mechanism for distributing funds

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[18] File 51447/044, Part 3 - Construction, New Island, 1909, Box 36, Entry 9, RG 85, NARA I.
[19] Letter, F. P. Sargent, Commissioner General to William Williams, (January 26, 1905), File 51436/1-8A - New Contagious Disease Hospital Ellis Island, Part 1, Entry 9, RG 85, NARA I.
[20] Letter, William Williams to Commissioner General, Bureau of Immigration, (28 January 1905), File 51436/1-8A, Part 1, Entry 9, RG 85, NARA I.
[21] Letter, William Williams to Commissioner General of Immigration, (28 January 1905), File 51436/1-8A, Part 1, Entry 9, RG 85, NARA I.

were settled, the Supervising Architect and his office could begin preparing plans.[22] Collaboration between immigration officials, public health surgeons, and federal engineers and architects in developing plans for the hospital would emerge as a defining characteristic of the design process, as already indicated by Williams. In July 1905 Acting Commissioner General Frank H. Larned informed Williams that "Honorable John [sic] Knox Taylor, Supervising Architect, expects to be in New York on Thursday for the purpose of conferring with yourself, Surgeon Stoner, and Chief Engineer Fry in regard to the plans for the new contagious disease hospital at your station."[23] The content of Taylor's visit and any subsequent communication were not recorded, until January 1906 when Taylor forwarded the following:

> …two prints showing the proposed arrangement of the Contagious Hospital to be built on the new island adjacent to Ellis Island. The Office regards the arrangement as shown as tentative only, and it is requested that you indicate on the plans such modifications as you may deem necessary, returning the prints to this Office, when the working drawings will be promptly taken up.[24]

It is unknown exactly which prints are referred to here, although two drawings signed by Taylor showing the hospital largely as constructed survive -- a "General View" birds-eye rendering of the entire complex and another showing the complex in both plan and elevation (Figure 4).[25] Commissioner General Sargent replied that he would return the plans with suggestions after conferring with the Surgeon General.[26] In June 1906 the "sketch plans" were approved by the Secretary of Commerce and Labor and the Office of the Supervising Architect could prepare architectural drawings.[27]

The design produced by James Knox Taylor and his Office of the Supervising Architect was for a pavilion plan hospital complex.[28] The core of the complex was a grouping of eight

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[22] Letter, F. P. Sargent, Commissioner General of Immigration to Secretary of Commerce and Labor, 30 March 1905), File 51436/1-8A, Entry 9, RG 85, NARA I.
[23] Letter, F. H. Larned, Acting Commissioner General of Immigration, to Williams, (10 July 1905), File 51436/1-8A, Entry 9, RG 85, NARA I.
[24] Letter, James Knox Taylor to Commissioner General of Immigration [F.P. Sargent], (12 January 1906), File 51436/1-8A, Entry 9, RG 85, NARA I.
[25] This birdseye rendering is very faded and no date is visible. It is labeled "Sketch #11" by hand. The elevation/plan has the handwritten date April 15, 1906. NPS Drawing No. 462/43,901, 2 Sheets, accessed at http://etic.nps.gov, Technical Information Center, Denver Service Center, NPS.
[26] Letter, F. P. Sargent to James Knox Taylor, Supervising Architect, (16 January 1906), File 51436/1-8A, Entry 9, RG 85, NARA I.
[27] Letter, V.H. Metcalf, Secretary of Commerce and Labor to Secretary of Treasury, (16 June 1906), File 51436/1-8A, Entry 9, RG 85, NARA I.
[28] During his tenure as Supervising Architect, James Knox Taylor (1857-1929) oversaw the design and construction of post offices, federal buildings, and custom houses. Taylor was born in Knoxville, Illinois and attended schools in St. Paul, Minnesota. He completed two years of architectural training at the Massachusetts Institute of Technology. Thereafter he worked for architectural firms in New York City and Boston but by 1882 had opened his own office in St. Paul. In 1884 he went into partnership with Cass Gilbert. The Panic of '93 adversely affected the architectural profession and by 1895, Taylor had joined the staff of the Office of the Supervising Architect as a draftsman. In 1896 he was promoted to temporary principal draftsman, and when the position of Supervising Architect became available in 1897 he was selected, serving until 1912. After retiring as Supervising Architect, he returned to private

identical two-story measles wards, the administration building, and kitchen, all attached on one side to an open two-story circulation corridor. The wards flanked the administration building/kitchen and were staggered on either side of the corridor to avoid cross contamination. Three free-standing isolation wards and a staff house stood at the southeast end of the island and a powerhouse, mortuary, and laboratory (with additional staff quarters) stood at the northwest end, at the gangway connecting to Island 2. This arrangement maximized the healthful benefits of fresh air and light, and provided all the necessary support structures for a self-sufficient institution. In addition each ward had a series of fresh air intake slits under the windows to help circulate exterior air through the ward. Outgoing air was carefully contained via a system of vents and ducts connecting to pipes and a central ventilator in the roof. These ventilation pipes are still extant in the attic of Ward A. In this historical moment, the pavilion plan was nearly fifty years old, but still a standard in hospital design. In just a few years, medical experts and architects would begin to vigorously seek alternatives, but the basic ideals of fresh air and sanitary conditions first espoused by Florence Nightingale continued to hold sway over the medical profession and their architects.

The pavilion plan had its origins in Europe and Great Britain, but in the United States it emerged from the aftermath of the Civil War with new attention to public health and the construction of hospitals. The predecessor to the Public Health Service, the U. S. Marine Hospital Service, was at the forefront of the development of modern hospitals and public health. Scientific understanding of disease and contagion was developing rapidly in the period as well, with the first, imperfect understanding of germ theory starting to coexist with older ideas of contagion by miasma or contaminated air. The discussion in the United States also benefitted from intense interest in this topic in Europe and Great Britain, begun a decade earlier by the Crimean War. Motivated by the unsanitary conditions in military field hospitals and her earlier study as a nurse, Englishwoman Florence Nightingale became a champion of hospital reform through her work in war relief, public policy and her writings. Nightingale's *Notes on Nursing* (1st American edition, 1860) and *Notes on Hospitals* (1st edition, 1859; 3rd revised edition, 1863) defined the debate about best practices on both sides of the Atlantic throughout the second half of the nineteenth century.[29]

Led by Nightingale's work, hospital architecture was increasingly seen as a key element in patient care. A rudimentary understanding of germ contagion led to great concern with choosing hospital plans and building materials that would be healthful and avoid making patients sicker. When Nightingale began her work, mortality in hospitals was much higher than for patients treated at home, prompting her open her *Notes on Hospitals* with the admonition that "the very first requirement in a Hospital [is] that it should do the sick no harm."[30] Proper ventilation, sanitation, light, and equipment were essential to healing both surgical and medical

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practice in Boston. He later moved his practice to Yonkers, New York and then retired to Tampa, Florida. See Lee, 197-199, 215; Henry F. Withey, and Elise R. Withey, *Biographical Dictionary of American Architects (Deceased)* (Los Angeles: Hennesey & Ingalls, Inc. 1970), 592.

[29] For an overview of hospital development see John D. Thompson and Grace Goldin, *The Hospital: A Social and Architectural History* (New Haven and London: Yale University Press, 1975), esp. 155-70 on Nightingale wards.

[30] Florence Nightingale, *Notes on Hospitals* (London: Longman, Green, Longman, Roberts, and Green, 3rd revised edition, 1863), preface.

cases and avoiding cross infection. The details of ventilation, finish etc. were much debated by the medical profession and their collaborating architects, but the overriding concept of a large hospital divided into freestanding or semi-attached pavilion wards dominated hospital design for the next fifty years. Informed by Nightingale's recommendations along with other leaders of the sanitarian movement, the pavilion plan hospital emerged in England, France and other European countries by the late 1850s and became commonplace by the 1860s.[31]

The overriding concern of the pavilion plan was providing cross ventilation for healthful airflow. This goal was accomplished by building a series of rectangular ward buildings placed parallel to each other and attached only on one side to a system of circulating corridors, if attached at all. According to British architectural historian Anthony King, "natural ventilation, from doors, windows and fireplaces was the rule. This uniformity of design among late Victorian hospitals, with its emphasis on spaciousness and natural ventilation, was the logical outcome of the general acceptance of the aerial conduction of disease, or, as it was known to contemporaries, the miasmic or pythogenic theory."[32] Nightingale's theories, and much of the early discussion of healthy hospital design, emerged from the observation that wartime patients often did better in temporary, tent like structures than the repurposed houses and institutions typically used as hospitals. The study *The Hospital: An Architectural and Society History*, emphasizes the importance of military administration and architecture in shaping Nightingale's influential ideas.[33] In Nightingale's view, the ideal hospital pavilions were only one-story high, to allow for proper temperature control and airflow. In reality the basic pavilion plan often was executed in multi-story form due to a variety of practical limitations such as limited land and efficient circulation of personnel around a large institution. Even as germ theory matured and ideas about contagion changed in the late nineteenth century, the older idea of infection through miasma or fermentation of bad air was too embedded and seemingly logical to be quickly dismissed.[34]

In the United States, all of the concern with the details of hospital design and the improvements underway by the 1870s can be seen as a reaction to the considerable flaws of the antebellum hospital and contemporary medical care. The first survey of hospitals in the United States conducted in 1873 found 178 examples, including insane asylums. Of these, only a small fraction would be modern, purpose-built medical facilities. In contrast, a 1923 survey found 4,978 U. S. hospitals.[35] As the number of new hospital buildings grew rapidly, the question of plan type, while still debated, seemed generally settled on the pavilion form promoted by Nightingale and other European reformers. Arguably the most prominent late nineteenth century hospital building project in the United States was the establishment of Johns Hopkins Hospital in

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[31] Jeremy Taylor, *The Architect and the Pavilion Hospital: Dialogue and Design Creativity in England 1850-1914* (London and New York: Leicester University Press, 1997), vii.
[32] Anthony King, "Hospital Planning: Revised Thoughts on the Origin of the Pavilion Principle in England," *Medical History* 10, no. 4 (October 1966), 360. He traces the contribution of other researchers and architects in addition to Nightingale to the spread of the pavilion hospital in England.
[33] Thompson and Goldin, 166.
[34] Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, 1987), 130.
[35] Rosenberg, 341.

Baltimore, which used a pavilion plan for its contagious wards. [36] Administrators were cautioned to pay utmost attention to cleanliness; rounded corners, painted plaster walls, and hard wood floors would aid in this critical endeavor. These ideas were still prevalent over twenty-five years later at Ellis Island. The Contagious Disease Hospital was a mature example of the pavilion plan hospital, as employed by the architects of the Office of the Supervising Architect of the Treasury for the USPHS. This form was still considered the most effective solution to creating hygienic hospital designs in this period, even as standards of medical care were undergoing new changes.

Final architectural drawings for the Contagious Disease Hospital were dated August 18, 1906. A single standard design was developed for all the Measles Wards. The construction bid offering was made on September 17, 1906, with proposals due on October 20, 1906. Although $250,000 was already appropriated for the new hospital, its construction would require at least twice that amount. In November 1906, the Commissioner-General of the Bureau of Immigration requested an additional $250,000 from the Secretary of Commerce and Labor. He closed his letter, which made requests for a number of other improvement projects, by saying:

> These newcomers are entitled to the best treatment which it is in our power to bestow and to subject them, at the time and place of landing, to the danger of disease and to the manifold discomforts which are certain to be produced by insufficient accommodations, is not conducive to good administration. The improvements herein advocated go far toward promoting humane and considerate treatment for many thousands of human beings who, while undergoing immigrant inspections, are temporarily the wards of the Government, which is responsible for their well-being.[37]

Although there appeared to be complete agreement regarding the necessity for a new hospital, acquiring sufficient funding was another matter. Of the construction bids collected, the lowest was $503,375 and the next lowest $584,385. These proposals did not include heating, wiring, or the elevator in the administration building, which would be a separate contract and additional expense. The Office of the Supervising Architect estimated that the complete project would require approximately $625,000 to complete.[38] As there was a general reluctance to request more than the $500,000 total, officials began debating the best approach to reconcile the difference between available funds and cost estimates.

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[36] *Hospital Plans: Five Essays Relating to the Construction, Organization, and Management of Hospitals Contributed by their Authors for the use of the Johns Hopkins Hospital of Baltimore* (New York: William Wood & Co., 1875), 144. Quaker philanthropist Johns Hopkins (1795-1873) left $3 million in his will with instructions for a group of trustees to consult with experts, build, and administer a charitable hospital in the city of Baltimore. One of the expert doctors consulted on the design was Army Surgeon John Shaw Billings. Billings had been assigned to special duty with the Treasury Department during 1869-70, in order to assess the hospital buildings of the U.S. Marine Hospital Service. He found only one recently built structure – the U.S. Marine Hospital in Chicago – to be satisfactory.

[37] Letter, Commissioner-General, Bureau of Immigration to Secretary of Commerce and Labor, (12 November 1906), File 52519/18, Entry 9, RG 85, NARA I.

[38] Letter, Secretary of the Treasury to Secretary of the Department of Commerce and Labor, (3 December 1906), File 51436/1-8A, Entry 9, RG 85, NARA I.

At question was whether to completely revise the plans or eliminate sections of the complex. The Office of the Supervising Architect suggested starting construction on selected parts of the complex that could be built within the original $250,000 appropriation, then moving on with additional phases as funds became available. According to their estimates, the Administration Building, Kitchen, Measles Wards A, B and E, and Powerhouse/Laundry with connecting corridors could be built for $201,590, with $48,410 for powerhouse equipment, elevator, heating, and wiring.[39] This condensed grouping would provide a complete, but smaller hospital during the first phase of construction. Bureau of Immigration officials were hesitant to embrace a plan that did not really address the potential funding shortfall. Acting Commissioner-General Larned insisted in an internal memorandum that "the safest plan would undoubtedly be to reject all the bids and alter the entire plans and specifications to bring the aggregate cost of the contagious disease hospital within the maximum limit of $500,000."[40] It is not clear how this was to be accomplished since Larned also endorsed Dr. Stoner's request that the revised plans not reduce the amount of space in the proposed hospital and he only suggested an elimination of "luxuries."

Acting Secretary of the Treasury Charles H. Keep reiterated the Supervising Architect's position that phased construction was the best approach, with wards and support structures eliminated according to the size of the appropriation. He noted that requesting new bids for revised plans would undoubtedly result in even higher costs, as it was doubtful the cost of building would decrease or another similarly low bid could be obtained. Keep also cautioned that "relative to changing the plans so as to make the buildings less expensive, it is believed that as now planned they are as cheap as it is practicable to build them so that they will be entirely suitable for the purpose and location."[41] The Bureau of Immigration finally agreed to proceed with phased construction as in the "best interests of the public service."[42] North-Eastern Construction Company of New York City was the lowest bidder. They were notified on January 3, 1907 that a portion of the work equal to $201,590 was being approved. Their contract would stipulate a completion date of November 1, 1908.[43] Alfred Brooks Fry, Chief Engineer and Superintendent of Repairs for the Public Buildings Branch in New York was designated as the federal Superintendent of Construction for the Contagious Disease Hospital project. He was jointly employed by the Departments of the Treasury and Commerce and Labor.[44]

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[39] Letter, C. H. Keep, Acting Secretary of the Treasury to Secretary of Commerce and Labor, (6 December 1906), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I.
[40] Memorandum, F.H. Larned, Acting Commissioner-General, Bureau of Immigration, (15 December 1906), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I.
[41] Letter, C.H. Keep, Acting Secretary of the Treasury to Secretary of Commerce and Labor, (18 December 1906), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I.
[42] Letter, Lawrence O. Murray, Assistant Secretary of the Treasury to Secretary of the Treasury, (19 December 1906), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I.
[43] Letter, Lawrence O'Murray, Assistant Secretary of the Treasury to North-Eastern Construction Company, (3 January 1907), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I.
[44]Letter, Oscar S. Strauss, Secretary of Immigration and Naturalization to Secretary of the Treasury, (30 January 1907), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I.

Because of the continuing need to lobby for funds to complete the hospital, the Bureau of Immigration continued to solicit information from local officials that could be used to justify additional appropriations. Ellis Island Commissioner Robert Watchorn complied statistics from the Medical Division for fiscal year 1906 at the request of Commissioner General F. P. Sargent. During this year 2,553 arriving aliens were found to have "loathsome and dangerous contagious diseases" such as diphtheria, scarlet fever, trachoma, favus (severe ringworm of the scalp), or tuberculosis. Of these 563 were detained at Ellis Island and 1,990 sent to hospitals in New York. These patients were in addition to the 1,366 observed for mental illness and the 5,124 detained for "all other diseases."[45] The immigration through Ellis Island was continuing to grow with 1907 as a peak year. In addition to the Island 3 expansion and hospital, this period also saw the expansion of existing facilities in an ongoing effort to upgrade and meet demand. In addition to expansions and renovations to Island 1 buildings, the general hospital on Island 2 was greatly expanded. As original planned by Boring and Tilton, the original section of the hospital on the west end of Island 2 received the center administration building and additional wing to the east. The new wing doubled the capacity of the original hospital and was known as the "New Hospital Extension." In 1907, 1,123,842 aliens and 146,833 U. S. citizens received medical inspections by the Ellis Island surgeons. Of the aliens, 9,293 were detained in hospitals for treatment and 3,605 deported for medical problems.[46]

Construction on Ward A and the other structures in phase 1 continued through 1907. North-Eastern submitted periodic progress photographs which are preserved at the National Archives. A set from early June shows Ward A complete up to the top of the first floor.[47] The brick wall surface is exposed and the adjoining corridor is at a similar stage of construction. By early July, the walls were complete up to the cornice with interior structural clay tile ceilings in place (Figure 5).[48] Trusses were being raised over the open ward end of the building. Ward A's roof was in place and sheathed with tile by mid-August, with the main ventilator stack installed. The exterior walls had received their finish coat of pebble and dash stucco.[49] By mid-October, the exterior appears to be complete, with window sash in place (Figure 6).[50]

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[45] Letter, Robert Watchorn to F.P. Sargent, (26 January 1907), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I. In January 1905, Robert Watchorn became commissioner in January 1905 after Williams resigned to return to his law practice. Watchorn was an experienced Bureau of Immigration official, with time spent as an inspector at Ellis Island.

[46] Unrau, Historic Resource Study, Volume II, 600. Between November 1906 and August 1907, Geddings conducted three inspections of the Ellis Island medical procedures and facilities and produced detailed reports. In his November 16, 1906 report to the Surgeon General, Assistant Surgeon General H. D. Geddings noted that the main hospital was designed on the block plan and that its system of mechanical ventilation was not in use, due to the fact that it never worked properly and the natural ventilation was good.

[47] See Photographs No. 121-BCP-38A-15G and -15I, (4 June 1907), in Record Group 121-BCP, Records of the Public Building Service, Prints: Photographs of the Construction of Federal Buildings, 1885-1954, Still Picture Branch, National Archives and Records Administration, College Park, MD [hereafter RG 121-BCP, Still Picture Branch, NARA II].

[48] See Photographs No. 121-BCP-38A-18B, -18D, -18E, -18H, and -18K, (2 July 1907), in RG 121-BCP, Still Picture Branch, NARA II.

[49] See Photographs No. 121-BCP-38A-19D, and -19I, (14 August 1907), in RG 121-BCP, Still Picture Branch, NARA II.

[50] See Photographs No. 121-BCP-38A-21, -21A, and -21D, (14 October 1907), in RG 121-BCP, Still Picture Branch, NARA II.

While work proceeded on Ward A and the first set of structures, plans were made for constructing the remaining portions of the complex. In July bids were solicited for construction of the other five Measles Wards, the three Isolation Wards, Staff House, Laboratory, Mortuary, and the rest of the covered passageways. North-Eastern Construction again entered the low bid for $298,405.60; each ward would continue to cost about $30,000.[51] However because the bid amount was still over the available second appropriation of $250,000, debate again ensued among Immigration officials about the propriety of moving forward without sufficient funds. Acting Commissioner General of Immigration Frank H. Larned demanded an explanation from Watchorn, asserting that "it appears we will be forced to abandon the plan of constructing certain of the isolation wards or other buildings included in the original scheme, so that the structures now being erected may be finished and equipped and certain of the contemplated buildings not only erected, but fitted up as well."[52] The work was again divided into two phases, after much discussion regarding which buildings to include. The erection of Measles Wards C, D and G, Isolation Ward L, the Staff House, Mortuary and some corridors were included under a $161,908.20 contract with North-Eastern Construction dated October 14, 1907.[53] The third phase saw construction of Measles Wards F and H, Isolation Wards I and K and the Office Building in 1908.

North-Eastern completed Ward A and the first group of structures in November 1907. There was some hesitation among government officials about accepting the buildings and closing the contract, since they still lacked heat. North-Eastern was eager to deliver the buildings to receive payment and avoid liability for damage that occurred while the buildings sat vacant. They had raised this issue months earlier, noting that the delay in letting heating and wiring contracts would require cutting finished work to install pipes and conduit.[54] Federal officials tried to avoid taking over the buildings on the grounds that North-Eastern completed them far ahead of schedule and left clean up and other minor task incomplete. The correspondence shows that they were also reluctant to assume the responsibility for providing temporary heating and preserving the condition of unoccupied buildings. Finally on December 30, 1907, the Bureau of Immigration, seeing no legal recourse, relented and performed the final inspection on the first group of buildings. [55]

In spite of the ongoing funding problems Ellis Island officials looked forward to the completion of the Contagious Disease Hospital. In his *Annual Report* for 1908 Robert Watchorn optimistically speculated that the mortality numbers for many diseases, such as measles, would drop when treatment could begin immediately rather than after a long transfer to contract

[51] Letter, Robert Murray, Assistant Commissioner, Immigration Service to Robert Watchorn, (1 August 1907), File 51436/1-8A Part 1, Entry 9, RG 85, NARA I.
[52] Letter, F. H. Larned to Robert Watchorn, (6 August 1907), File 51436/1-8C, Entry 9, RG 85, NARA I.
[53] Contract, File 51436/1-8D, Entry 9, RG 85, NARA I.
[54] Letter, North-Eastern Construction Co., to Secretary of Commerce and Labor, (26 February 1907), File 51436/1-8B Part 2, Entry 9, RG 85, NARA I.
[55] See correspondence in File 51436/1-8D, Entry 9, RG 85, NARA I.

hospitals.[56] In the spring of 1909, all seventeen buildings designed for the Contagious Disease Hospital were complete. However, the complex still lacked equipment and furnishings, as well as a tie to electricity on Island 1 and these matters delayed its opening until 1911.[57] The Island 3 hospital finally opened for patients on June 20, 1911, ending the need for contracts with outside hospitals. It had a total capacity of 450 beds, but in the early years usually housed 30 to 130 patients.

The completion of the Contagious Disease Hospital came at a time of change for Ellis Island and the Public Health Service. In 1912, the "Marine Hospital" part of the agency's full name was dropped, completing a transition to fully emphasizing their broader role protecting the American public. According to Dr. Alfred C. Reed, an Assistant Surgeon at Ellis Island:

> An enduring commonwealth must of necessity guard rigidly the health of its citizens and protect itself against undesirable additions from without. . . . The medical phases of immigration blend very quickly into the subjects of national health protection, national eugenics and even the future existence of the ideals and standard of life which we are proud to call American. Conservatism and a carefully maintained medium between absolute exclusion, and free immigration, certainly seems the best policy.[58]

His conservative tone was indicative of a growing tightening of immigration policy. William Williams was reappointed Ellis Island Commissioner in 1909 and continued to generate controversy with strict enforcement of immigration law, particularly regulations to determine whether an immigrant was likely to become a public charge for financial or other reasons.

In another article, Dr. Reed emphasized his respect for his colleagues by saying "the variety of contagious diseases is unusual and extreme diagnostic skill is required of the physicians in charge."[59] In 1912 there were 130 medical officers and hospital attendants employed at Ellis Island. The system of treating quarantine cases – diseases such as cholera, yellow fever, smallpox, typhus, leprosy, and plague legally requiring isolation – in the Quarantine Hospital near Staten Island continued. The new Contagious Disease Hospital filled the gap in government medical facilities for other diseases considered "loathsome and contagious" such as measles, scarlet fever, chickenpox, trachoma, favus, and tuberculosis. A large number of patients detained on Island 3 had trachoma, an infectious eye disease that could lead to blindness. A contemporary account attributed the large number of trachoma cases among

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[56] As quoted in Unrau, *Historic Resource Study, Volume II*, 602 from *Annual Report of the Commissioner General of Immigration* (1908), 233-35.
[57] Stakely, 65. See also Letter, William Williams to Commissioner General, (19 October 1910), File 52519/18C, Entry 9, RG 85, NARA I.
[58] Alfred C. Reed, "Going Through Ellis Island," *Popular Science Monthly* 82 (January 1913): 11.
[59] Alfred C. Reed, "The Medical Side of Immigration," *Popular Science Monthly* 80 (April 1912): 392. A third article by Reed offers a useful summary of the history of U.S. Public Service up to the period when the Contagious Disease Hospital opened. See "United States Public Health Service," *Popular Science Monthly* 82 (April 1913): 353-375.

European immigrants to "low vitality and filthy surroundings."[60] In addition to trachoma cases, many patients at the Contagious Disease Hospital were children with measles, scarlet fever, or diphtheria.[61]

The trachoma cases were particularly difficult for the medical and immigration officials, since many aliens did not even know they had the disease and felt fine. They tended to be difficult when detained in the hospital, in Williams' words, "very bad hospital patients." Treatment, which involved surgery or repeated scouring of the underside of the eyelids to kill diseased tissue, was lengthy and often unsuccessful. Williams expressed little sympathy for these patients' woes: "Each detained case encourages the bringing here of others. . . . As between holding them at Ellis Island or allowing them to go to city hospitals I find it very difficult to say which is the least objectionable practice."[62] Williams held the opinion that any detained trachoma patients should be grateful they were not immediately returned. His view was tempered by higher officials in Washington, who took a more evenhanded approach to the issue. Secretary Charles Nagel wrote in a memorandum on this issue:

> So far as ingratitude on the part of aliens is concerned, we should not permit it to interfere with what we may otherwise regard to be our duty. Complaint against restraint is a common manifestation and we need not go to aliens to find proof of it. . . . There is no doubt that leniency here is apt to increase the number of aliens so afflicted, and our question is a practical one. How can we relieve here without giving encouragement to an increase in the cases that call for relief. However that may be, I am satisfied that inasmuch as trachoma, for illustration, is not a crime but a misfortune, and since in many cases the rejection of one alien upon such a ground must work very serious injury to him or her and to all family connections, we should be prepared to do what we can to remove such a difficulty.[63]

Nagel's rather benevolent view was that trachoma was curable and detained patients should receive the best possible care. The medical staff seemed more inclined to agree with Williams. Troublesome trachoma and favus patients could be held at Ellis Island for six to eighteen months for an uncertain cure, all the while complaining about the food and disturbing other patients. Dr. M. H. Foster recommended rather naively that they be "returned to their own homes where treatment can be administered while they follow their customary pursuits."[64] Chief Medical Officer George Stoner, along with recommending deportation, pointed out that the families of these patients were likely to

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[60] "Ellis Island: Its Organization and Some of Its Work," (December 1912) transcribed in Unrau, *Historic Resource Study, Volume II, Appendix L*. See esp. 492, 501.
[61] *Annual Report of the Surgeon General of the Public Health Service* (1913), 158-59, reproduced in Unrau, *Historic Resource Study, Volume II, Appendix D*, 711.
[62] Letter, William Williams to Commissioner General, (27 July 1911), File 52516/11A, Entry 9, RG 85, NARA I. See also Letter, William Williams to Commissioner General, (24 March 1913), File 52516/11B, Entry 9, RG 85, NARA I.
[63] Memorandum, Charles Nagel, Secretary, (21 February 1912), File 52516/11A, Entry 9, RG 85, NARA I.
[64] "Memorandum in regard to treatment cases of trachoma and ringworm of the scalp," [1913], File 52516/11B, Entry 9, RG 85, NARA I.

catch a more dangerous, acute contagious disease while also waiting in detention.[65] While certainly a difficult issue, one wonders whether these doctors understood that many of these patients no longer had homes to return too.

The Contagious Disease Hospital connecting corridors were designed to be open, but it was almost immediately determined that enclosing them with windows would benefit the circulation of patients, staff, and food during inclement weather. Williams first requested funds for this work in July 1911.[66] It was not until June 1913 that funds were appropriated to install windows in the two-story passageways at the Measles Wards and extend a one-story passageway to the freestanding structures such as the Office Building, Staff House, and Isolation Wards. This work was done in 1914 at a cost of $28,000, according to plans prepared by engineers Alfred Brooks Fry and Frank S. Howell at the Public Buildings New York office.[67]

Immigration decreased quickly after the outbreak of war in Europe in 1914. Less volume meant that more intensive medical inspections could take place, particularly for "feeble-mindedness." The Surgeon General noted in his 1916 *Annual Report* that the Surgeon Mullan and PHS officers at Ellis Island had developed standardized tests for feeble-mindedness and almost completed a manual of guidance for identifying mental diseases in aliens.[68] These efforts were an outgrowth of the contemporary interest in intelligence testing, as well as eugenics and other quasi-scientific methods of categorizing racial types. With the lull in immigration, the hospital laboratory was also available to support Public Health Service research in addition to routine testing.[69]

Commissioner Frederick Howe instituted a number of reforms during the war years, all directed toward humanizing the experience of processing or detention at Ellis Island. He came under loud criticism, mainly from New York business interests, for allowing outdoor recreation, educational opportunities, and investigating bankers, railroad agents and others he felt preyed upon new immigrants. World War I brought additional changes to the island. On July 30, 1916, the munitions warehouses at Black Tom Wharf on the nearby New Jersey coast exploded. Thought to be the work of German saboteurs, the resulting concussions and flying debris broke windows, damaged every building on Ellis Island, and caused a temporary evacuation of the hospitals and dormitories.

After the United States entered World War I in April 1917, immigration slowed even more. The number of people arriving at Ellis Island in 1915 was 178,416, but by 1918 only

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[65] "Memorandum regarding hospital treatment for excludable diseases," (20 March 1913), File 52516/11B, Entry 9, RG 85, NARA I.
[66] Letter, William Williams to Commissioner General, (7 July 1911), 5, File 52519/18C, Entry 9, RG 85, NARA I.
[67] See Sundry Civil Expenses, June 23, 1913, appropriations for Fiscal Year ending June 30, 1914, File 52519/18-D, Entry 9, RG 85, NARA I; and "Inclosing [sic] Corridors, Contagious Disease Hospital," (12 March 1914), NPS Drawing No. 462/43912, 7 Sheets, Accessed at http://etic.nps.gov, Technical Information Center, Denver Service Center, NPS. The one-story corridors were built on the existing concrete walks and pipe trenches, eliminating the need for foundation work.
[68] Quoted in Unrau, *Historic Resource Study, Volume III*, 746.
[69] Unrau, *Historic Resource Study, Volume III*, 748.

28,867 immigrants passed through the facility's doors.[70] Crews of German and Austrian ships were seized and detained at Ellis Island in the Baggage and Dormitory Building on Island 1. The USPHS was responsible for their medical care and prisoners were relocated to the hospital facilities when necessary. The mix of groups being treated at the hospital became more complicated as various detained groups needed to be accommodated along with immigrants, servicemen, and others entitled to care. The Immigration Act of 1917 further increased the duties of the depleted Ellis Island USPHS staff by requiring medical examination of the crew of every merchant ship, in addition to the usual inspection of passenger vessels. In March 1918, the Ellis Island hospitals were temporarily turned over to the U.S. Army for processing and treating returning servicemen. They were designated "Debarkation Hospital No. 1." Immigrant patients were sent to hospitals throughout the region during the Army occupation.

The hospitals were returned to the USPHS on June 30, 1919.[71] They became Marine Hospital No. 43 on September 1. Ward A was designated Wards 17 and 18 (first and second floors). Care for immigrants remained a priority, but beds were also reserved for other USPHS beneficiaries including seaman and discharged military personnel. Medical procedures continued to keep pace with the times, including extensive laboratory work, x-ray apparatus, and occupational therapy.[72]

Medical inspections for immigrants took place on ship until March 16, 1920, when the inspection of steerage passengers resumed on Ellis Island. However the increasingly restrictive immigration laws began to alter Ellis Island's function. Officials at Ellis Island were charged with implementing changes in immigration law established by the Immigration Act of 1917, which included additional categories for exclusion of immigrants such as illiteracy and more extensive medical examinations. The anti-foreign concerns of the war years were replaced by fear of communism and expressed in the "Red Scare," a period of hysteria in which suspected alien communists, anarchists, socialists and radicals were targeted for deportation. The Quota Act of 1921 changed the general tenor of immigration control in the United States to a more restrictive policy, limiting the numbers of newcomers by nationality percentages from the 1910 Census. Prior to 1921, immigrants were assumed to be eligible for admission barring specific evidence to the contrary. The new shift to a quota-based system reflected a public mood against Southern and Eastern European immigration and instead preemptively barred entry based solely on nationality.[73]

After the Immigration Act of 1924 tightened the quotas even further to be based on the 1890 census, a period prior to the more recent influx of Southern and Eastern Europeans, the flow of new immigrants continued to taper off. According to Harlan Unrau in his *Historic Resource Study* of Ellis Island, the 1924 law changed the principal function of Ellis Island from immigrant processing to assembly, detention, and deportation.[74] Most inspections took place on ship or prior to departure through U.S. consulate employees. Chief Medical Officer W. C.

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[70] Unrau, *Historic Resource Study, Volume I*, 7.
[71] Unrau, *Historic Resource Study, Volume III*, 787, 796.
[72] Unrau, *Historic Resource Study, Volume II*, 620-22.
[73] See Williams, esp. 15-16.
[74] Unrau, *Historic Resource Study, Volume III*, 896.

Billings wrote to the Surgeon General regarding the changes in Ellis Island medical inspection and care after the Immigration Act of 1924, noting that the hospital now cared for a mix of aliens and U. S. citizens who were Marine Hospital system beneficiaries.[75]

A 1924 Surgeon General's report lists the types of patient care undertaken in each ward and other details regarding the operation of the hospital in this period. Wards 17 and 18 were being used for treatment of the trachoma, with twenty-four beds in each ward. Ward 17 on the first floor was designated for male trachoma patients and Ward 18 on the second floor for female. Heat, light and power supplied by a central plant on Island 1. A vacuum system to distribute the steam was installed on Island 3 in 1922-23. The wards were naturally ventilated, with an average temperature of seventy degrees. Typically the medical staff of a large hospital was divided into specialties such as medical, surgical, and eye, ear, nose and throat services. Here the categories were modified to meet the special needs of Ellis Island – female medical, male medical, genito-urinary (including venereal), psychopathic, eyes and scalp, acute contagious, American seaman (medical and surgical). Patients suffering from contagious diseases were sent directly to the Island 3 hospital for processing and assigned to a specific ward to prevent the spread of infection.[76]

Starting on May 20, 1926, intensive examination of alien seaman was undertaken. Those found with venereal or other communicable diseases were confined to hospital while their ships were in the Port of New York. The primary hospital serving this function was the Quarantine Hospital in Stapleton, Staten Island, but Ellis Island received many overflow patients. The growth of this function and decline of immigration given stricter laws during the 1920s meant that the Ellis Island hospital now treated more seaman than immigrants – the latter now only twenty-five percent of the patients.[77] In 1927, Chief Medical Officer Ezra K. Sprague wrote that "U.S. Marine Hospital No. 43 is becoming a marine hospital in fact as well as in name."[78] The larger percentage of "old line beneficiaries" meant that the hospital was treating more chronic conditions, with longer hospital stays. Clinical research studies began to play a larger role in the Ellis Island hospital program, such as a 1931 study of gonorrhea treatment. Perhaps most significant to long term patient stays, tuberculosis care for Marine Hospital beneficiary patients from throughout Greater New York became a large part of the hospital activities, as described in the Surgeon General's *Annual Report* for 1930. An additional ward of forty beds was created in the second floor corridor. Other physical changes to the Contagious Disease Hospital in these years were minor and involved tasks such as replacing screens, painting, and repairing roofs.[79] The biggest change to the hospital areas in this period was gradual infill of the lagoon between

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[75] Letter, Billings to Surgeon General, (30 July 1925) General Subject File, 1850.15, RG 90 – Record of the Public Health Service, National Archives and Records Administration, quoted in Unrau, *Historic Resource Study, Volume III*, 919.
[76] Unrau, *Historic Resource Study, Volume II*, 640, 644, 646.
[77] Unrau, *Historic Resource Study, Volume III*, 920, 926.
[78] Letter, Sprague to Surgeon General, (27 July 1927) General Subject File, 1850.15, RG 90, quoted in Unrau, *Historic Resource Study, Volume III*, 922.
[79] Beyer Blinder Belle/Anderson Notter Finegold, *Ellis Island Statue of Liberty National Monument: Historic Structures Report Units 2, 3 and 4, Volume 4, Part 1[Measles Wards]*, (U.S. Department of the Interior, National Park Service, 1986), 289-90; 278-79.

Islands 2 and 3 in order to provide more recreation space for patients and staff. After repeated funding requests, work did begin, although it would not be completed until the 1930s.[80]

After the stock market crash in October 1929, economic opportunities in the United States were limited, and President Herbert C. Hoover instructed American consuls to strictly apply rules preventing the immigration of people likely to become public charges. Further, Secretary of Labor William N. Doak organized "…a national roundup of illegal aliens for prospective deportation and transferred many of them to Ellis Island."[81] These efforts were sensationalized by the press and roused anti-immigrant sentiment among the general public. In 1931, perhaps as a counter action to the xenophobia displayed by some American authorities, the press, and a portion of the public, Edward Corsi became Ellis Island's new Commissioner of Immigration, remaining in that post until 1934. Corsi was himself an immigrant who had come through Ellis Island in 1907. His professional life involved extensive social service work among New York City immigrants. When Corsi first arrived and toured the facilities, he was most pleasantly surprised by the hospital, which he found "large and well-equipped, and certainly a credit to the Public Health Service of the United States."[82] His desire to humanize the Ellis Island experience and to make the facility an "inspiration" to both Americans and to immigrants led to improvements in infrastructure and social service programs.[83]

With the election of President Franklin D. Roosevelt in 1932, new programs and new funding sources were established to create jobs, construct public buildings, support social and economic development, and find humane approaches to solving local, regional and national issues. Known as the New Deal, these programs included funding under the National Recovery Act from sources such as the Public Works Administration (PWA) and the Works Progress Administration (WPA), and studies of conditions at federally-owned facilities. Under the leadership of new Secretary of Labor Frances Perkins, a 52-member nonpartisan citizen committee was formed to analyze the conditions, operations, and facilities at Ellis Island. The goal was to improve the physical plant and the immigrant experience and evaluate immigration law with a view toward fairer and more effective rules. Corsi worked closely with the committee and many of his ideas were incorporated into the Committee's report to the Secretary of Labor.

The Committee's report listed many recommendations. Among those implemented were adding lawn and shelters in the infill area between Island 2 and Island 3, construction of a New Immigration Building, Ferry Building, and Recreation Building and Shelters, alterations to the main immigration building and other related buildings to better segregate immigrants from deportees.[84] In the hospitals, New Deal funding was used for much needed repairs and

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[80] Stakely, 77.
[81] Unrau, *Volume I*, 1984, 9.
[82] Quoted in Unrau, *Historic Resource Study*, *Volume III*, 934.
[83] Williams, 17-18.
[84] Report on the Sub-Committee on Buildings, Grounds, and Physical Equipment for Ellis Island (13 September 1933), 1. The report was located in Folder 330 – WPA Projects 1933-37, Box 16, Record Group 79 – Records of the National Park Service, National Archives and Records Administration (NARA), Northeast Region, New York City [hereafter RG 79, NARA – NE Region]. The full report was published in March 1934. See U. S. Department of Labor, *Report of the Ellis Island Committee*, (New York: Ellis Island Committee, March 1934).

renovations. The Ellis Island Committee included adding sun porches at the south ends of Wards 17 and 18 among their improvement recommendations. Also recommended for Wards 13-14, 19-20, and 23-24, these porches were to be for the treatment of tuberculosis patients. However they were never constructed.[85]

The Measles Wards were renovated during the mid-1930s as part of a large effort to expand the "neuropsychiatric" facilities at Ellis Island, first initiated in 1935. The Surgeon General of the USPHS proposed to expand the capacity at Ellis Island in lieu of including a psychiatric ward at the new Marine Hospital under construction at Stapleton, Staten Island. The Surgeon General's rationale was conveyed by the Department of Labor in making a $125,000 procurement request to the Treasury Department Branch of Public Works for necessary renovations. Labor Department official Turner Battle wrote:

> Because of the neuropsychiatric work required for immigration cases as well as for merchant seaman, Coast Guardsmen, Employees' Compensation Commission cases, and other beneficiaries, the Public Health Service must maintain a competent neuropsychiatric clinic in the Metropolitan area of New York. Moreover, the Immigration Service has imperative need for the services of such a clinic at Ellis Island, and in order to conserve Government funds, prevent duplication of effort and at the same time, by reason of greater experience with more clinical material, provide better services for all beneficiaries, the neuropsychiatric clinic now in operation at Ellis Island should be further developed and houses according to modern ideas governing such work rather than attempt to provide a separate clinic in the new Marine Hospital now under construction at Stapleton, S.I. by so doing, the needs of all beneficiaries will be better served and such a clinic will serve as a clearing house for neuropsychiatric cases arising in nearby marine hospitals and provide training facilities for young physicians and nurses who are engaged in neuropsychiatry at Ellis Island and other field stations of the Public Health Service.[86]

In addition to renovating Wards 9 and 10, the original Psychopathic Ward on Island 2, various wards on Island 3 were to be modified and dedicated to various types of psychiatric patients. Renovations listed for Wards 17 and 18 were "close up openings between rooms," "new millwork at entrances, corridors and stairs," "new hardware throughout," and "gratings in stair windows."[87] These proposed changes were less extensive than some of the other wards such as 11 through 14.

The emergency construction fund approved on August 12, 1935 included $125,000 for renovations and repairs to the Ellis Island hospitals for expanded "neuropsychiatric work."

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[85] Beyer Blinder Belle/Anderson Notter Finegold, *Historic Structures Report*, 280-281.
[86] Letter, Turner W. Battle for Secretary of Labor to Rear Admiral C.J. Peoples, Director, Procurement Division, Branch of Public Works, Treasury, (22 March 1935), Box 5877, Entry 31C- General Correspondence and Related Records, 1910-1939, RG 121 – Records of the Public Building Service, National Archives and Records Administration, College Park, MD [hereafter Entry 31C, RG 121, NARA II].
[87] Ibid.

Surgeon General H. S. Cumming contacted the Director of Procurement at Treasury, whose office was to prepare the plans and specifications, in order to express his approval and pledge the full cooperation of his office and the Chief Medical Officer at Ellis Island so that "these most essential facilities may be provided for at the earliest practicable date."[88]

Neill Thompson, an architect with the Public Works Branch of Treasury, visited Ellis Island From September 9 through 14 to gather information for working drawings of the renovations to wards 9 through 20, inclusive. Thompson's description of these meetings again demonstrates the close collaboration between the government architects and doctors at the Ellis Island hospitals. He conferred with Department of Labor officials, as well as Chief Medical Officer Claude Lavinder and Assistant Superintendent of Buildings Booth.[89] He returned with draft drawings on November 13 and 14, touring the wards with Dr. John Reichard, a psychiatrist, and Booth. They reviewed the draft working drawings and the revisions were approved by Dr. Lavinder. Then Thompson made sketches of the remaining wards on Island 3 and several on Island 2 and went over proposed changes with Dr. Lang, a tuberculosis specialist. These sketches were also approved by Dr. Lavinder so Thompson could prepare working drawings. [90]

By January 1936 it was determined that the planned work would cost $36,000 more than the $125,000 appropriation, so parts of the project would need to be cut.[91] Portions of the work in Wards 17 and 18 were listed as "alternate" in the revised specifications, including "new doors, painting, and linoleum" for both. In addition, Ward 17 (first floor) was included in the base bid while Ward 18 (second floor) was omitted.[92] The exact work was not specified but this may explain why the first floor duty room has the added toilet while the second does not. Finally in September 1936, the Department of Labor was ready to contract the work, with the approval of the USPHS. Contractors Albert & Harrison of New York signed a $123,000 contract (with $6,001.92 additional) for the renovation work on October 8, 1936.[93]

Progress on this work was slow, initially because of delays receiving metal doors and frames and overall because the wards were occupied by patients. The medical staff was reluctant to increase overcrowding at the hospital by giving more than a few wards to the contractors – the nature of the window and floor replacement in many wards meant that patients and equipment had to be completely removed for the duration of the work. Progress reports by Clyde Key, a government construction engineer, repeatedly recorded that the contractor's work flow was

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[88] Letter, H.S. Cumming, Surgeon General, Public Health Service to Director of Procurement, (11 September 1911), Box 5876, Entry 31C, RG 121, NARA II. The Procurement Division/Public Works Branch was the successor agency to the Office of the Supervising Architect.
[89] Letter, Neill P. Thompson to W.E. Reynolds, (17 September 1935), Box 5876, Entry 31C, RG 121, NARA II.
[90] Letter, Neill P. Thompson, Associate Architect to W. E. Reynolds, Assistant Director of Procurement, (19 November 1935), Box 5875, Entry 31C, RG 121, NARA II.
[91] Letter, Turner Battle, Executive Assistant to the Secretary, Department of Labor, to Director of Procurement, Treasury, (7 January 1936), Box 5877, Entry 31C, RG 121, NARA II.
[92] Memorandum, Byron Uhl, District Director to W.H. Wagner, Director, Immigration and Naturalization Service, (18 January 1936), Folder 164 and 165, Box 8, RG 79, NARA – NE Region. Each folder has a copy of this memo with slightly different information attached.
[93] Letter, Turner W. Battle, Executive Assistant to the Secretary to W.E. Reynolds, Assistant Director of Procurement, (28 September 1936), Box 5873, Entry 31C, RG 121, NARA II.

impeded by only being able to work on a few wards at a time. The completion date was scheduled for July 27, 1937 and at the end of February the work was only 23 percent finished.[94] In April 1937 Director of Procurement W.E. Reynolds acknowledged the contractor's difficulties and explained the position of the medical staff while granting the first in a series of extensions:

> It was, however, impossible for the Medical Officer in charge to release sufficient space to insure completion of the work within the time limit specified, due to the fact that patients were moved to this hospital from the Marine Hospital at Stapleton. As a result the wards were full and the Medical Officer could not release space as originally contemplated. It was impossible to work in occupied wards as steam and water had to be cut off and windows torn out and replaced.[95]

However Reynolds declined to approve a claim for increased costs because of the delay. By June, it was Ward 17's turn. It was determined when moving the patients that the wood floor was rotted, so requests were made to add replacement of wood sleepers, floor, and linoleum to the tasks to be completed here.[96] Installing acoustical tiles on the ceiling and metal doors and sash were also part of the Albert & Harrison's contract, although Wards 17 and 18 still have their wood doors and windows. Floor plans dated April 24, 1936 show the proposed changes to these wards, many of which were never actually executed (Figure 7). These eliminated tasks include removing the window frame and bricking up the window openings between the duty room and wards, removing the dumbwaiter and closing opening, and replacing the doors and frames.

The contractor and officials continued to haggle over the project completion date and progress; by the summer Key blamed Albert & Harrison for the slow progress.[97] A problematic issue with the new door hardware was also raised by the medical staff at this time. Apparently all the locks were supposed to take one master key, but instead each was different. The medical staff felt that is was unsafe to use these wards for psychiatric patients without a master key, delaying their use further. [98] The renovations were "99.3" percent complete by January 1938, although requests for damages by both parties delayed the final closing of the contract.[99] The Inspection Engineer noted in his report that the work was done well, but "the money would have been used to a better advantage if spent in building new up-to-date structures."[100]

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[94] Letter, Clyde Key to Supervising Engineer, (23 December 1936), and Progress Report, (February 1937), Box 5873, Entry 31C, RG 121, NARA II.
[95] Letter, W.E. Reynolds, Director of Procurement to Albert & Harrison, (28 April 1937), Box 5872, Entry 31C, RG 121, NARA II.
[96] See Letter, Clyde Key to Supervising Engineer, (20 May 1937); and Letter, Louis A. Simon (Acting Assistant Director of Procurement) to Albert & Harrison, (12 June 1937), Box 5872, Entry 31C, RG 121, NARA II.
[97] Letter, Clyde Key to Supervising Engineer, (28 July 1937), Box 5872, Entry 31C, RG 121, NARA II.
[98] See Letter, Marshall C. Guthrie, Medical Director, Acting Chief Medical Officer, USPHS to Director of Immigration and Naturalization, Ellis Island, (16 July 1937), Box 5872, Entry 31C, RG 121, NARA II.
[99] Progress Report, (January 1938), Box 5872; and see correspondence regarding claims by Albert & Harrison for extensions and damages and a $10,000 lawsuit against the contractor by the government in Boxes 5871 and 5870, Entry 31C, RG 121, NARA II.
[100] Letter, H. R. Dillingham, Inspection Engineer to Supervising Engineer, Procurement Division, (3 November 1937), Box 5871, Entry 31C, RG 121, NARA II.

The outbreak of World War II immediately impacted Ellis Island. The shifting nature of immigration was most strongly expressed in the transfer of the Immigration and Naturalization Service from the Department of Labor to the Department of Justice on June 14, 1940. After the U.S. entered World War II, the INS was responsible for detaining enemy aliens.[101] In July 1939 the Public Health Service was transferred to the Federal Security Agency in a federal reorganization. During World War II, various buildings on Ellis Island were again used by the military and as a training facility by the U.S. Coast Guard Port Security Unit. The hospital complexes housed wounded servicemen, and detainees, and the main immigration building housed suspected enemy aliens.

Following World War II, Ellis Island again processed and treated sick or injured immigrants and deportees. In 1949-50, a number of other wards in the Island 3 Contagious Disease Hospital – Nos. 13, 14, 17, 18, and 23 - were being used for the mentally ill.[102] For a time following the passage of the Internal Security Act of 1950, Ellis Island housed as many as 1,500 detainees. Under that act, aliens who had been members of Communist or Fascist organizations were excluded from entry into the United States. However, the government soon realized than many people from eastern Europe, Italy and Germany seeking entry to the United States had been forced to join Communist or Fascist youth groups.[103] The law was modified and thereafter many former detainees were allowed to enter the United States.

On March 1, 1951, the U.S. Public Health Service closed the hospitals on Island 2 and Island 3 due to the declining number of patients, and the hospitals' status as obsolete. However, the Public Health Service maintained a small infirmary for detainees in the main immigration building.[104] After the USPHS vacated the hospitals on March 1, 1951, they were occupied by the Coast Guard. The Coast Guard reportedly used some of the Measles Wards for file storage.

On November 12, 1954, both immigration and Coast Guard operations ceased on Ellis Island. Equipment and fixtures, including plumbing, were removed from many buildings and distributed to other federal entities including border patrol offices, federal prisons, the Public Health Service, the military, and the General Services Administration.[105] From 1954 until 1965, Ellis Island was under the control of the General Services Administration, which sought to sell or lease the property.[106] After several unworkable proposals, the island was placed under the jurisdiction of the National Park Service and on May 11, 1965, President Lyndon B. Johnson issued Proclamation 3656 adding the island to the Statue of Liberty National Monument.[107]

PART II. ARCHITECTURAL INFORMATION

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[101] Unrau, *Historic Resource Study, Volume III*, 827-33.
[102] Unrau, *Historic Resource Study, Volume III*, 968
[103] Unrau, *Historic Resource Study, Volume I*, 11; Williams, 20.
[104] Stakely, 92.
[105] Unrau, *Historic Resource Study, Volume III*, 1002.
[106] U.S. Senate, 89th Congress, 1st Session, *Report No. 306. Disposal of Ellis Island (*Washington, D.C., U.S. Government Printing Office, 1965).
[107] Unrau, *Historic Resource Study, Volume I*, 11; Williams 20.

A. General Statement:

1. Architectural character: Measles Ward A is one of eight pavilion wings built from a standardized plan for the Contagious Disease Hospital. It is a two-story structure with a hipped roof, connected to the hospital corridor on its north end. Its Georgian Revival appearance, with red tile roof, stucco walls, and red brick quoins and details, is consistent with the rest of the sprawling, interconnected hospital complex on Island 3. While other Measles Wards have heavily altered interiors, Ward A still has an intact plan with open wards and numerous historic interior features. The interior division between the open ward in the southern two-thirds of the building, and the service rooms (bathrooms, nurses' duty room, etc.) at the north next to the corridor is clearly communicated on the exterior. A shallow set back to the wall framed by brick quoins and telescoping hip roof form indicate the two functional zones of the pavilion.[108]

2. Condition of fabric: Good/Fair. Many historic features are intact, but there is some water damage and decay of historic fabric.

B. Description of Exterior:

1. Overall dimensions: Measles Ward A is nine bays long and one large bay wide.

2. Foundations: Measles Ward A has tall brick foundation walls with a course of smoothly dressed granite located at grade. Above grade the brick section is 13 courses high laid in a five to one common bond. An extra course laid in a stretcher pattern is located at the granite base. The top of the foundation walls is a water table of sloped header bricks.

3. Walls: The walls are brick with a pebble dash stucco veneer. Red brick quoins accent the corners and the projection at the junction of the ward and service rooms. A band of corbelled red brick at the top of the walls creates a cornice. There is a horizontal rectangular spandrel between the first and second floor window openings. This shallow recess has the same pebble dash stucco finish as the rest of the wall surface.

4. Structural system, framing: Measles Ward A stands on a system of concrete piles and girders with load bearing brick walls. The floor slabs are structural clay tile. Three steel beams are used to help span the open ward. The roof structure includes three wood king post trusses in the ward area, with a metal rod serving as the king post. Two modified half trusses were placed on the stair side of the service hall. The roof of two by eight inch rafters was placed above and bolted to the trusses at the ridge and wall plate.

5. Porches, stoops, balconies, bulkheads: None.

[108] The waterside or ward end façade of Measles Ward A is oriented to the south/southwest, but to simplify the description here it is considered to be facing due south.

6. Ventilator: There is a large round copper ventilator at the roof ridge over the service portion of Measles Ward A. This ventilator was linked to a series of galvanized tin ? ducts and flues moving fresh air through the building. This elaborate ductwork is still in place in the attic.

7. Openings:
a. Doorways and doors: The only exterior doorways for Measles Ward A are located at the north end of the structure in the connecting corridor. There are two leaf doorways at the center stair hall on the first and second floors. These openings have a deep reveal with the wood door frame set directly into the masonry wall. The first floor opening is rectangular and the one of the second floor is a segmental arch. Like the exterior window openings, the second floor doorway has an arched decorative hood formed by a brick keystone, flatter stucco areas, and brick corner blocks. The two leaf wood doors in each opening have two recessed horizontal panels on the lower section and a large area of glazing above. One side of the second floor doors retains the original dark stained varnish finish. The frame has a simple ovolo trim and the doors hang on large pin hinges. The doors have oval metal knobs and escutcheons with a keyed lock above the knob on one side. A large transom is divided into two lights and tilts inward from the bottom; on the second floor the top rail of the transom is curved to follow the arch of the opening. An additional screened transom frame is located on the corridor side. Scars on the door frame indicate that screen doors have been removed. An additional doorway with a single door is located at the stairwell on the first floor only. The trim, door and hardware match the paired hallway doors on the first floor, although this doorway does not have a transom. With the exception of paint, broken glass, and some minimal damage, all of these doors and doorways appear to be original.

b. Windows: The windows for Measles Ward A have been covered with plywood on the exterior, but are visible on the interior. The typical window opening on the first floor is rectangular with a limestone lug sill. The wood sash is set directly into the masonry wall with a moderate reveal. The similar second floor openings have a segmental arch shape with an arched decorative hood formed by a brick keystone, flatter stucco areas, and brick corner blocks. Window openings for the wards on both floors have a narrow fresh air intake under the sill. The windows have double hung wood sash divided into two over two lights. The second floor sashes have a curved upper rail. The fenestration on the side elevations are of uniform size and evenly spaced, except for the slightly smaller single windows for the service rooms. A wider window divided by a thick mullion is located at the center bay of the service area east elevation. While visually similar to the other windows, this opening contained separate one over one sash for the kitchen and linen rooms. The south elevation has a wider three-part variation on the typical window at the open ward end walls. The first floor rectangular opening has two thin one over one sash separated from a wider one over one sash in the center by wide mullions. The second floor ward end window is similar, with the typical second floor segmental arch, decorative hood, and curved upper rail on the sashes. The original drawings show a single mid-floor window at the stair landing, but this feature appears to have been altered in the original building campaign into a window on each floor.

8. Roof:

a. Shape, covering: Measles Ward A has a telescoping hipped roof with the taller section over the service rooms and connecting corridor on the north third of the pavilion. It is sheathed with red clay shingle tiles with curved ridge and hip tiles outlining the roof shape.

b. Cornice, eaves: Measles Ward A has open eaves with exposed decorative notched rafter ends. A length of two by ten inch decorative rafter projects from the two by eight common rafters encased with the roof structure. Copper gutters are intact with replacement pvc downspouts and some original cast iron downspout bases. The corbelled brick at the top of the walls forms a simple cornice.

C. Description of Interior:
1. Floor plans: Measles Ward A has an intact original floor plan illustrating the self-contained functioning of each hospital pavilion. Although connected to the rest of the Contagious Disease Hospital at the corridor on the north end, each floor of Ward A had its own self-contained support rooms. An enclosed stair next to the main corridor controlled vertical circulation. Two-thirds of each floor is an open ward with windows on three sides and space for fourteen beds. The service rooms were arranged along a central double-loaded hall connected perpendicularly to the main corridor. Each floor had an office, bathroom, utility closet, toilet room, nurses' duty room overlooking the ward through an internal window, linen room, and kitchen. The only change to the plan over the years was a small water closet added for the first floor nurses' duty room. This tiny room projected into the floor space of the adjacent linen room. The second floor duty room/linen room never had its small water closet added along east wall as indicated in 1936 plans.

2. Stairways: A two-story stair hall is located at the northeast corner of the structure. It contains a three-quarter turn open-well stair. The intermediate stair between landings is shorter than the other two. The stairway has cement carriage and risers with slate treads that project over the edge of the string. The wrought iron balustrade begins at a curved curtail step at the first floor. The balustrade has thin balusters with thicker stanchions periodically used to the bolt the balustrade to the stair. The wood handrail has a curtail at the bottom and ramps at each transition between stair and landing. The concrete girders supporting the second floor stair carriage are visible from below.

3. Flooring: Original drawings for the Measles Wards call for hardwood floors with a coved wood baseboard laid over a structural clay tile subfloor in the wards and many of the service rooms. Currently these areas have square blue and white asphalt tiles, often in poor condition. The baseboards in the rooms with asphalt tile are a thin, applied black composite material. It is likely that these floors replaced the original hardwood during the 1930s. Gray and white terrazzo floors are located in the bathrooms, utility closets, and toilet rooms. These floors have a darker gray border with a continuous coved baseboard. This may be the terrazzo indicated on the original drawings for these spaces. The kitchens on both floors have a square red quarry tile floor with a matching tile baseboard.

4. Wall and ceiling finish: Walls and ceilings in Measles Ward A are plaster on structural clay tile with coved and rounded edges. Avoiding corners or moldings where dirt could collect was

consistent with hospital sanitary practices developed during the late nineteenth century. The bathrooms, utility closets, and toilet rooms have a white marble wainscot with light gray veining. Marble wainscot is indicated on the original drawings for these spaces. Visible structural beams in the ceiling are covered with plaster. The ceilings are high to provide healthful air circulation.

5. Openings:
a. Doorways and doors: Ward A has a number of interior doorways lining the double loaded center hall. There are single leaf doorways on the west and east sides for access to various service rooms – nurses' bedroom/office, bathroom, utility closet, toilet room, nurses' duty room, linen room, kitchen, and stair hall. The wood door frames are set into a plastered opening without applied molding. The west side of the hall has a deep reveal while the east is shallower. The typical door found throughout is wood with five very shallow horizontal panels. The original finish of dark brown varnish survives on many of the second floor doors. A wider opening with a two leaf door is located at each end of the center hall – the north doorway leading to the corridor and the south into the open ward. The south doorways have the same trim and doors at the single leaf examples. The glazed doors for the north doorways have been described in the exterior section above. The inside of these doors has shallower panels in the lower section, like those in the other doors. Plain, flat door molding executed in marble with angle joints appears inside the bathroom and toilet room doorways.

The dumbwaiter located in the stair hall had access doors on each level at the south wall. These doors are similar to the others, except they have a Dutch door horizontal seam, allowing easier access to the contents of the dumbwaiter. The interior of the stair hall doorway into the main corridor has details and trim consistent with the other doors.

A narrow doorway was added through the north wall of the first floor nurses' duty room. This opening is for the small water closet inserted at the east wall of the linen room. The simple metal frame here is missing its door. There are no other connecting doorways between rooms.

b. Windows: The interior of the windows has a wide, flat frame edged with ovolo molding. Windows are set into a shallow plastered recess in the walls without additional sills. The windows in the bathrooms and toilet rooms have marble sills and marble on the lower part of the reveal at the wainscoting. The interior frame corresponds to the rectangular (first floor) or segmental arch (second floor) shape visible on the exterior.

The split window at the linen room/kitchen has its original clear glazing on the second floor, while the sash was modified on the first floor to have opaque privacy glass divided into two vertical lights on each side. Opaque privacy glass is also located in the bathroom windows on both floors.

There are also several window openings located on interior walls. The nurses' duty rooms each have a large window facing the open ward that follows the design of the other windows on that floor. These windows have glazed, movable sash just like those on the exterior and would allow the nurse to observe the ward while inside the duty room. A rectangular wood cased window opening for borrowed light is located high on the wall between the bathroom and utility closet on

each floor. These openings have flat frames with ovolo molding on the edge. The wood sash has the remnants of clear glazing on the first floor; the glazing is missing on the second floor. There is also a rectangular metal hopper window in the wall between the first floor linen room and the inserted water closet. This window has a flat metal frame flush with the wall and a chain stop at the upper corner. This opening also allowed for borrowed light and air and had opaque privacy glass.

A heavy gauge diamond pattern wire security grille was installed over the inside of both toilet room windows. These openings also have opaque privacy glass.

6. Decorative features and built-ins: The linen room on each floor has built-in cabinets along the south wall with a bead board back panel and medium brown varnish finish. Each built-in is composed of three sets of drawers with shelves above. The cabinet shelves each have a pair of three-light glazed doors. The drawers for the lower sections have been removed. Original pin hinges and spring-loaded latches are intact on the cabinet doors. There is a wood frame mirror hung over the sinks in the first floor toilet rooms. There is a simple wall-mounted shelf on metal brackets in the first floor kitchen.

7. Hardware: The windows have finger plates and sash locks. The typical door hardware appears to be original and is an oval metal knob placed on the lower half of a metal escutcheon. Keyed or handled mortise locks appear in the upper section of the escutcheon when present. The doors all have ball tip pin hinges. Various metal hooks, pegs, and towel bars hang from walls in the kitchens, duty rooms, bathrooms, toilet rooms, and utility closets.

8. Mechanical equipment:

a. Heating, ventilation: Measles Ward A was heated with cast iron radiators linked to a central boiler plant. Radiators are placed under the window in each of the service rooms, and around the open ward. The typical radiator has wide rounded fins. Those on the first floor sit elevated on wood blocks, which may be a later modification related to flooring changes. An effective ventilation system was central to pavilion plan hospital design. In Measles Ward A, ducts, ventilation grilles, and fresh air intakes helped circulate air through the building while preventing air that had been inside each ward from circulating to other interior spaces. In addition to the intakes under the windows, each open ward had large rectangular vents located near each corner of the room. These vents occur in pairs, with one high on the wall near the ceiling and one at the baseboard. On the first floor two pairs are located at the end (south) wall of the ward near each corner and flanking the doorway to the central hall in the service area. On the second floor two pairs are located on the side walls near both the north and south ends of the ward. Additional ventilation openings were located in the bathrooms and toilet rooms. These square openings are located high on the wall on the first floor and low on the second. All of the vents are covered with a metal grille of square perforations. Large ventilation pipes in the attic and the flues in the interior walls at the bathrooms and toilet rooms were connected to the ventilator at the ridge over the service rooms.

b. Lighting: Measles Ward A was built with electrical service, but the existing fixtures were probably installed during the 1930s. White porcelain wall sconces are found throughout the structure – in most of the service rooms and in the open wards on the walls between every other window. These fixtures include an electrical socket. Two outlet electrical sockets are placed at the same height on the alternating wall areas. Ceiling fixtures include flush mounted porcelain or metal bases with opaque glass closed shades, as well as later metal pole ceiling fixtures with a clip-on metal shade or a chain pendant ceiling fixture with a metal open bottom shade. There is some external electrical conduit in this structure that indicates changes or wiring upgrades after its initial construction.

c. Plumbing: Measles Ward A was constructed with a variety of plumbing fixtures, some of which have been changed or removed. Exposed pipes in many areas indicate that plumbing has been changed or upgraded over the years. The bathrooms both have marble shower stalls with a terrazzo base and chrome faucets with X-shaped handles. There are metal soap dishes mounted inside the shower stall near the faucets. Original drawings indicate a free-standing bathtub in these spaces (like the surviving one in Ward B), so the shower stalls are a replacement. They are indicated on drawings from April 24, 1936.[109] No sink survives in the second floor bathroom, but the first floor bathroom has a large oval sink on a thick turned pedestal. This cast iron rolled-edge sink is coated with white porcelain and no longer has faucets.

Both toilet rooms have a pair of marble stalls with pipe supports and bracing. Each stall contains a tankless ceramic toilet with a black seat. The stalls in the first floor toilet room retain wood doors with two vertical recessed panels and a circular lock. Each toilet room has two sinks that may be original. They are porcelain wall-mounted sinks with diagonal pipe supports (identical to those in the Staff House). The faucets have separate hot and cold, typically with x-shaped handles. One sink on the first floor has lever handles on the faucets.

Both utility closets have surviving pipes and top mounted x-handle faucets, but the sinks have been removed. The nurses' bedroom/office at the northwest corner of the first floor has a wall-mounted ceramic utility sink supported by brackets. It no longer has a faucet. There is a later wall mounted ceramic sink added to the duty room on the first floor. This sink has a mixer faucet with angular x-shaped handles. The water closet inserted into the linen room for this space has a simple tankless ceramic toilet like the other ones in this structure. The first floor kitchen has a surviving wall mounted sink. It is a porcelain coated cast iron model with separate hot and cold faucets projecting from the back (handles missing). A porcelain-coated cast iron drain board shelf is mounted to the wall and hooked over one edge of the sink.

d. Dumbwaiter: There is a dumbwaiter located in the northwest corner of the stair hall. Each opening has a five panel Dutch door with the usual dark varnish finish and metal hardware. These doors have a with a shallow ledge at the lower section for balancing items being taken in

[109] "Details of New Marble Enclosures, USPHS Marine Hospital," (24 April 1936), Public Works Branch, Drawing No. 10-14, NPS Drawing 462/43953, accessed via http://etic.nps.gov, Technical Information Center, Denver Service Center, NPS.

and out of the dumbwaiter. Its internal cabinet and the rope and pulley mechanism used to operate the dumbwaiter are still in place, but damaged and no longer functional.

e. Other: There is a round door bell on the outer doorframe for Measles Ward A. Modern communication routers and electrical boxes are mounted on the walls in various parts of Measles Ward A.

D. Site: Measles Ward A projected from the south side of the main Contagious Disease Hospital. The seawall is located close to its south wall. As a pavilion for the pavilion-plan hospital, Measles Ward A was open on three sides and separated from neighboring structures by courtyards. This arrangement allowed for healthful air circulation and abundant natural light.

PART III. SOURCES OF INFORMATION

A. Architectural drawings: A computerized Drawings Index System for all types of Ellis Island architectural and engineering drawings is located at the Technical Information Center (TIC), Denver Service Center, National Park Service. Original drawings are digitized and available at http://etic.nps.gov. The drawings most useful in preparing this report were:

Office of the Supervising Architect, James Knox Taylor, "Contagious Disease Hospital," (15 April 1906), NPS Drawing No. 462/43,901, Sheet 1 of 2, [site plan and elevation].

Contagious Disease Hospital – Measles Wards, (18 August 1906), James Knox Taylor, Supervising Architect, Treasury, NPS Drawing No. 462/43,902B, Sheets 1-13 [original elevations, plans, section, details, and framing].

Public Buildings Service, New York, "Inclosing [sic.] Corridors Contagious Disease Hospitals," (12 March 1914), NPS Drawing No. 462/43,912, Sheets 1&2 of 7, [plans and details].

U.S. Department of Labor, Drawing No. E 1008-1, "Hospital Buildings, Island 3," (10 September 1928), NPS Drawing No. 462/43,920, Sheet 2 of 2, [floor plans and site plan].

Public Works Branch, Treasury Department, Drawing No. 10-7, "Second Floor Plan (Ward No. 18) and First Floor Plan (Ward No. 17)," NPS Drawing No. 462/43,493, (24 April 1936) [floor plan with proposed changes].

B. Early Views: Several construction photographs of Measles Ward A are located in the collections of the Still Picture Branch, National Archives and Records Administration (NARA II), College Park, MD. They are found in Record Group 121-BCP, Records of the Public Building Service, Prints: Photographs of the Construction of Federal Buildings, 1885-1954. General views of the Contagious Disease Hospital are found in Record Group 90-G, Records of the Public Health Service. Selected specific views are reproduced and identified below.

C. Bibliography:

See notes for a listing of relevant archival materials from:

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- *Record Group 85 – Records of the Immigration and Naturalization Service, National Archives and Records Administration, Washington, DC.*

- *Record Group 121 – Records of the Public Buildings Service, National Archives and Records Administration II, College Park, MD.*

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PART IV. PROJECT INFORMATION

Documentation of Measles Ward A and other selected structures on Ellis Island (Phase II) was undertaken by the Historic American Buildings Survey (HABS), within the Heritage Documentation Programs (HDP) of the National Park Service (Catherine C. Lavoie, Chief, HABS; Richard O'Connor, Chief, HDP) during 2010. The project was sponsored by Statue of Liberty National Monument, David Luchsinger, Superintendent. Field recording and measured drawings were completed by Paul Davidson, HABS Architect and Project Supervisor; and HABS Architects Daniel De Sousa, Alexander Matsov, and Anne E. Kidd. HAER Architect Dana Lockett and HABS Architect Robert Arzola served as Project Leaders. Julia Sienkewicz (University of Illinois, Urbana-Champaign) and HABS Historian Lisa Pfueller Davidson served as project historians. HABS Photographer James Rosenthal completed large-format photographs during fall 2010. Assistance was provided by the staff of Statue of Liberty National Monument, particularly Diana Pardue (Chief, Museum Services Division), Richard Holmes (Archaeologist), Don Fiorino (Historical Architect), and Kathleen Sullivan (Project Manager).

PART V. SUPPLEMENTAL MATERIAL – ILLUSTRATIONS

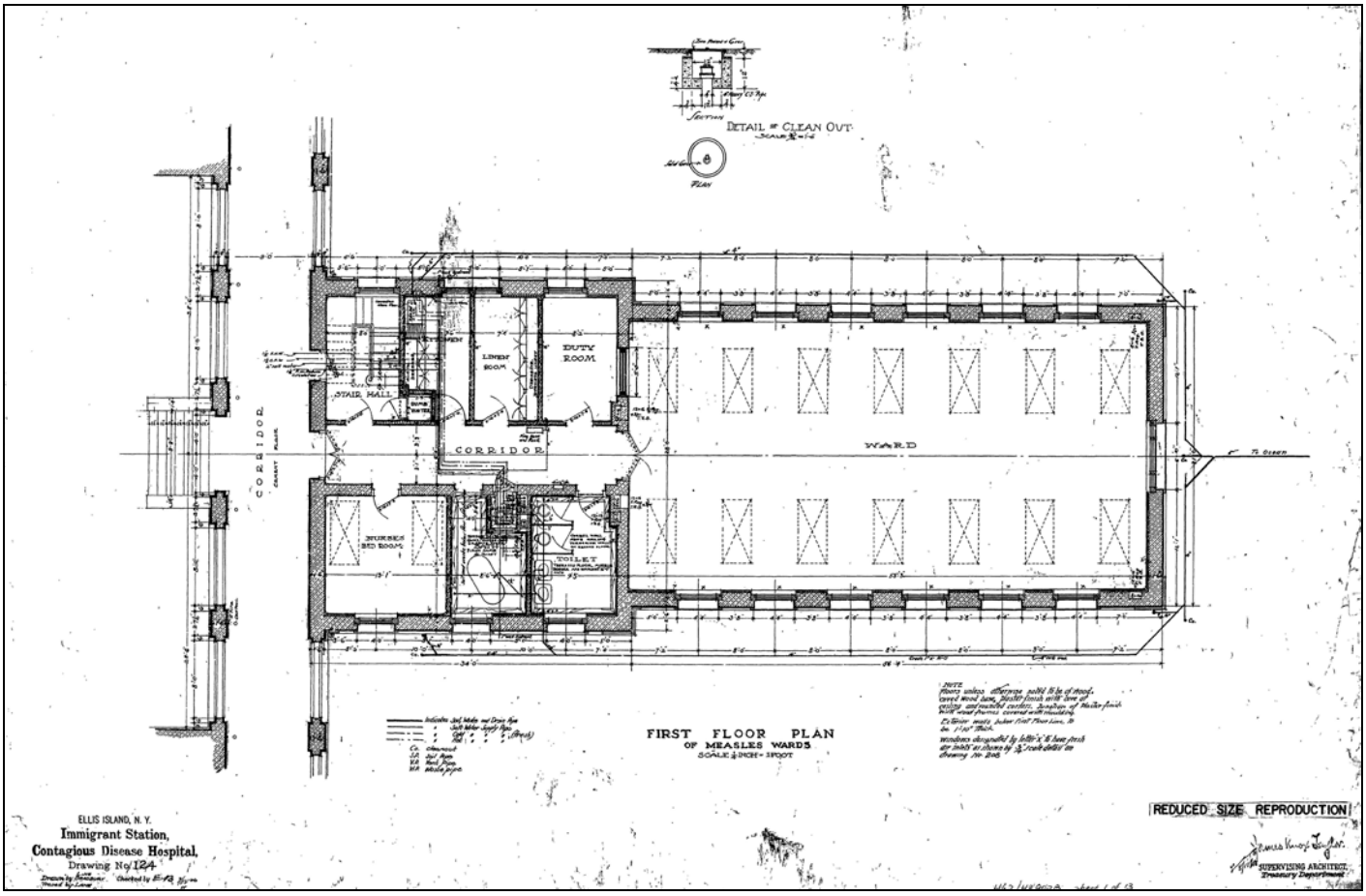

Figure 1: Office of the Supervising Architect, "First Floor Plan of Measles Wards," (18 August 1906)
(NPS Drawing No. 462/43,902B Sheet 1 of 13)
Source: Technical Information Center, Denver Service Center, National Park Service

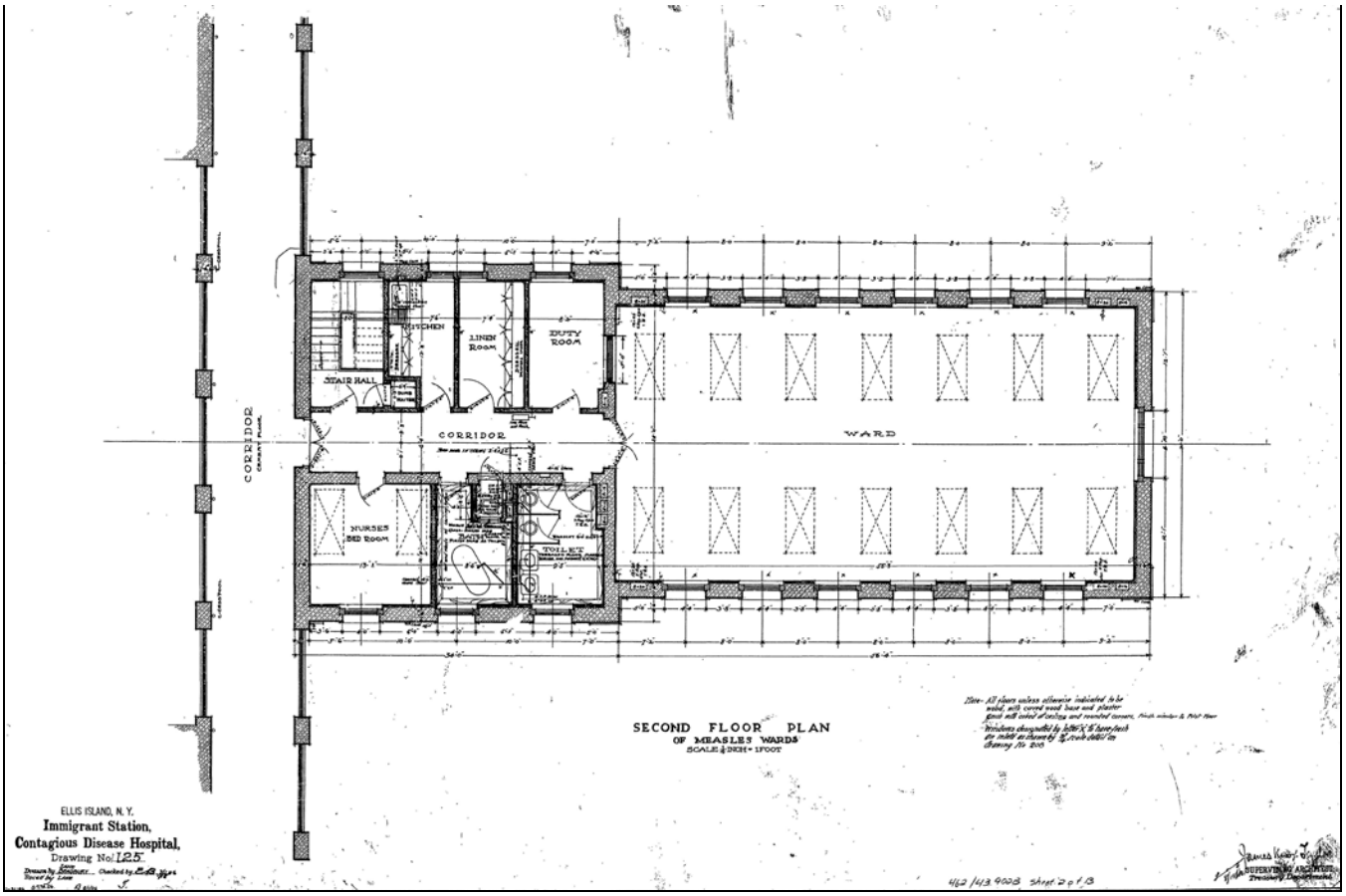

Figure 2: Office of the Supervising Architect, "Second Floor Plan of Measles Wards," (18 August 1906)
(NPS Drawing No. 462/43,902B Sheet 2 of 13)
Source: Technical Information Center, Denver Service Center, National Park Service

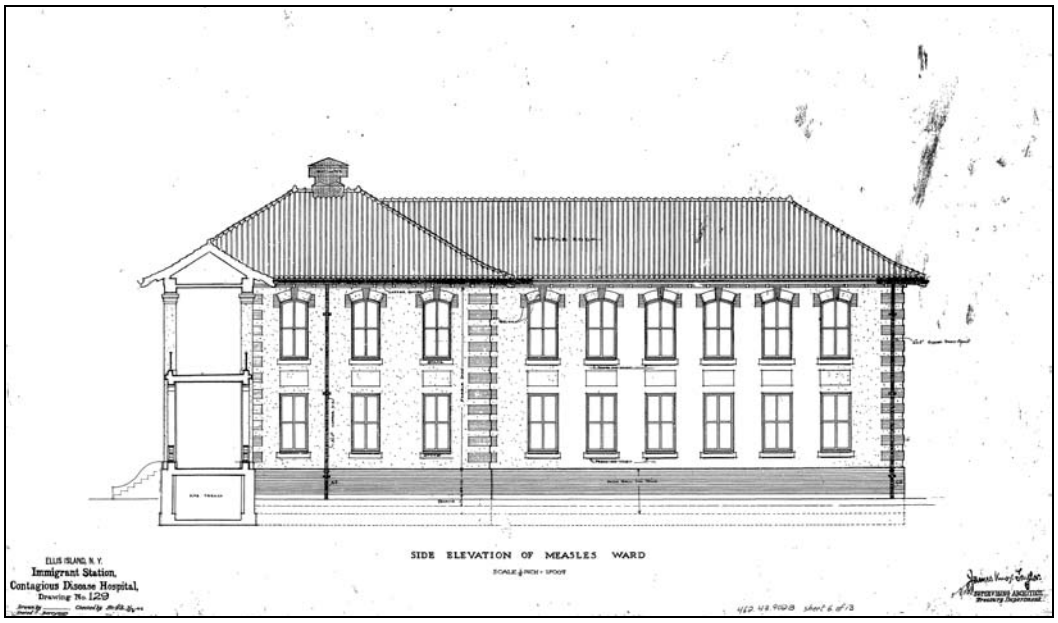

Figure 3: Office of the Supervising Architect, "Side Elevation of Measles Ward," (18 August 1906)
(NPS Drawing No. 462/43,902B Sheet 6 of 13)
Source: Technical Information Center, Denver Service Center, National Park Service

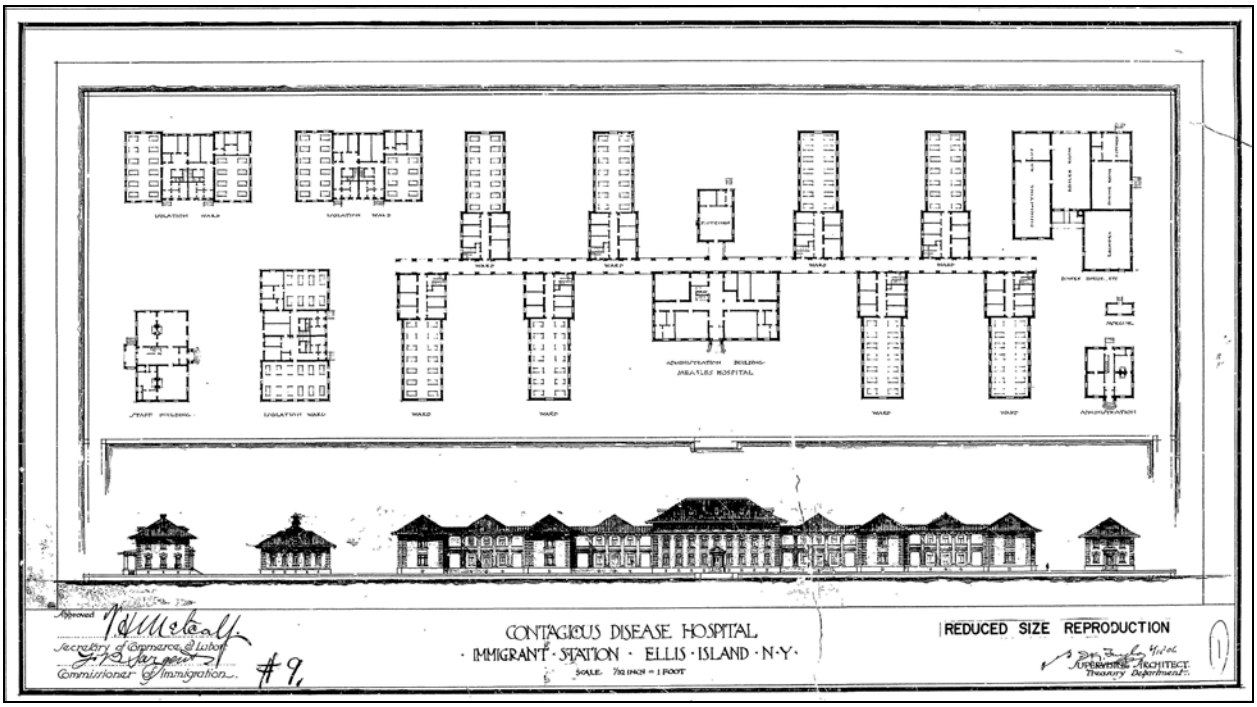

Figure 4: Office of the Supervising Architect, "Contagious Disease Hospital, Immigrant Station, Ellis Island, NY" (15 April 1906)
(NPS Drawing No. 462/43,901 Sheet 1 of 1)
Source: Technical Information Center, Denver Service Center, National Park Service

Figure 5: "Corridor and Ward 'A' Looking South, July 2, 1907," (Photograph No. 121-BCP-38A-18D)
Source: Record Group 121-BCP, Still Picture Branch, National Archives and Records Administration, College Park, MD

Figure 6: "Kitchen and Ward 'A,' Looking North," (14 October 1907), (Photograph No. 121-BCP-38A-21D)
Source: Record Group 121-BCP, Still Picture Branch, National Archives and Records Administration, College Park, MD

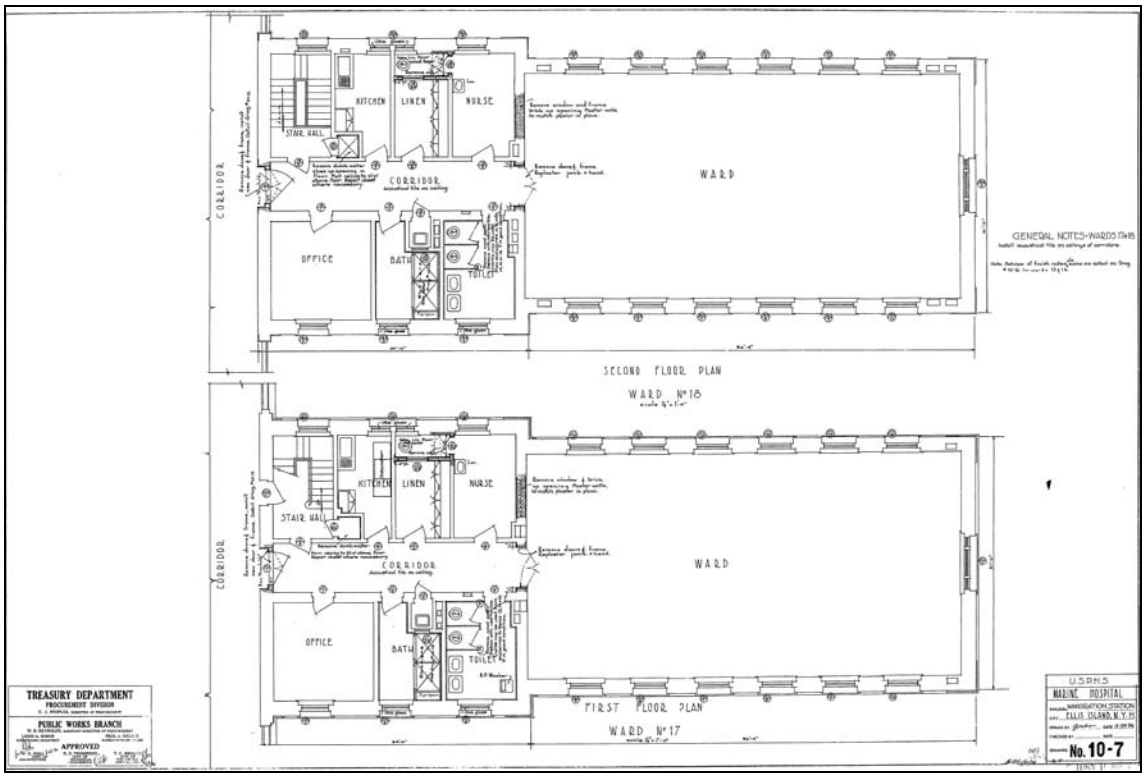

Figure 7: Public Works Branch, USPHS Marine Hospital – Ward No. 17 and 18, (24 April 1936) (Original Drawing No. 10-7)
Source: Technical Information Center, Denver Service Center, National Park Service